The Hand Book of Indian Medicine

The Gems of Siddha System

By

Dr. T. G. Ramamurthi Iyer

SRI SATGURU PUBLICATIONS
INDIA

Published by :

Sri Satguru Publications,
First Floor,
40/5, Shakti Nagar,
Delhi-110007,
India.

First Edition : Erode 1933

Distributed by :
INDIAN BOOKS CENTRE,
Exportors of Indian Books,
40/5, Shakti Nagar,
Delhi-11007
INDIA

Printed in India.

FOREWORD

BY

DR. C. MUTHU,
M.D., M.R.C.S., L.R.C.P.,
Associate of King's College, London.

The revival of the Indian system of Medicine at the present day is one of the welcome signs of the times, and is seen in such publications as the present volume by Dr. T. G. Ramamurthi Iyer. The Ayurvedic and Siddha systems of medicine date back to a hoary antiquity, and became in the course of time the parent source of all the other Medical Systems of the world. The humoral theory of the Hindus, though misunderstood, dominated the Greek, Roman, and Arabian medicine and in Europe down to the eighteenth century. Many of their medicine plants and drugs, spices and aromatics have been incorporated in the materia medica of almost every nation in the world. In fact, the influence of their medical works, their materia medica and therapeutics and plastic surgery, etc, can be detected in the Persian, Hebrew, Greek,

Roman, Arabic, Chinese, Tibetan and even in modern Europe—so that Colebrook was right when he said that in medicine the Hindus were teachers and not learners.

And yet, the ancient system of medicine as practised by Charaka, Susruta, Aghastiar strikes one as so very new and modern. For instance, the three humours, on which the Indian medical system is based, represent the modern scientific ideas of metabolic, glandular and endocrine activities and their disturbance in the causation of disease. When the Siddha physicians lay a great stress on the importance of minerals in the treatment of disease, they are voicing the present biochemical teachings which show that the deficiency of mineral salts in the human body is the main cause of many diseased conditions, and health can be restored and disease averted by supplying this deficiency of tissue salts The Ancients prescribed, as we do now, Datum stramonium in asthma; cowitch in worms, nux vomica in paralysis and dyspepsia, arsenic in intermittent fevers, salt-free diet in Bright's disease, flesh and fatty foods in consumption, and mild purgatives in the first stages of dysentery. When the Hindus included in their pharmacopeia such things as fat, bile, bone marrow, blood,

flesh, hoof. etc, they early anticipated the therapeutics of the present day which prescribes cod liver oil, ox gall, bone marrow, haemoglobin preparations, raw meat, and calf's foot jelly. And when we add to these their knowledge of minerals and chemistry, of hypnotism, hygiene, eugenics, massage, postural treatment, organotherapy, of anaesthetics, contagion, we cannot but exclaim that there is nothing new under the sun in the modern methods of treatment.

Well versed in all departments of human knowledge, and bold and original in their conception of disease and its treatment, the Ayurvedic and Siddha physicians found a remedy for almost every ailment the flesh is heir to. They were experts in the purification, calcination and oxidation of minerals, and in gathering and storing medicinal plants, and the efficacy of their medicines remained for a long time, and indeed grew with age. They were masters in treating many difficult diseases and poisoned conditions, as leprosy, snake bite, etc, which baffle us at the present day. Alas, some of their most important methods of healing are lost to us from disuse, neglect and want of support--lost to us in the ancient medical works and manuscripts. What is most

urgently needed at the present day is a band of earnest and enthusiastic research workers who would devote their time and energy to examine and study the ancient learning, delve into the secrets of Indian medical science and art, lay bare their treasures of healing, and incorporate them with all that is best in the modern ideas and discoveries for the benefit of mankind. May we hope that this volume would in some measure stimulate a real interest in Indian Medicine both in the East and the West, and help the ninety per cent of the Indian population who depend upon it for the relief and cure of their sickness and suffering.

C. MUTHU.

APPRECIATION.

VAIDYARATNA
Pandit C. S. Murugesa Mudaliar,
SENIOR LECTURER, SIDDHA,
Govt. Indian Medical School
&
Resident Physician, G.I.M.S. Hospital.

KILPAUK.
Madras, 28-1-1934.

Since the dawn of history, South India, with which is associated the Tamil language and Siddhas---has distinguished itself in many aspects of human understanding from the rest of the World, whether in religion or philosophy, law or medicine, art or music, it possesses many unique features which enables one to reach the highest peaks of knowledge in spite of the modern material civilisation.

In the following pages the reader will enter into one such peak pertaining to the medical field. As the name of the book indicates, he will be able to get from it, many gems if only one recognises them as such. Some scientific persons may resent at the Author's attempt to correlate ancient things with modern ideas. However, from a broader outlook the book is a mine of information regarding some of the fundamental principles and reputed remedies of the "Siddha System of Medicine."

C. S. Murugesa Mudaliar.



DEDICATED TO

M.R.Ry. Rai Bahadur
N. Nallathambi Sarkarai Uthama Kaminda
Mandradiyar Avergal, M.L.C.,
Pattagar of Palayakottai.

Dedication.

This book, however humble it may be is dedicated to M.R.Ry. Rai Bahadur N. Nallathambi Sarkarai Uthama Kaminda Mandradiyar Avergal, M.L.C., the Pattagar of Playakottai, Coimbatore District in South India. He comes of a famous and historic family celebrated for generosity and hospitality, the essential Hindu virtues. The family's name can be traced even back to 100 B.C , and they were once great warriors. The Pandya King conferred on his forefather, the title of "Uthama Kaminda" and made him the Pattagar of Kongu Nadu, who has the sovereign right to settle all religious and social questions. He carries on the noble traditions of his family and adds glory to their greatness by his democratic outlook. He plays a prominent part in the Local Self-Government from 1906 and has earned a solid reputation for efficient, generous and expert administration. He is the embodiment of kindness and sympathy and the weary and the needy never pass his doors unfed and unrewarded. His name is proverbial for all the virtues attributed to the ideal Hindu family holder and for all that is best and noblest in Hindu culture.

He is an "Ideal Farmer" and a "Cattle Prince". His enlightened patriotism is responsible for many thriving institutions of an indigenous nature and he always carries with him light and cheer. His name is associated with the Dharma of cow protection and in fine he sums up in himself the typical landlord, generous to the poor, and specially interested in Education, Medical Relief, Co-operation and Rural development.

His enthusiasm for the cause of the Siddha System, has led me to this dedication.

May God bless him with long life, prosperity and happiness and may he grow from strength to strength to carry on his work of love and philanthropy.

THE AUTHOR.

PREFACE.

This book is an attempt to present to the Medical and Scientific world, a short account of the principles and practice of the time honoured Sidha System of medicine. It does not pretend to be an exhaustive treatise and is intended to provoke thought and stimulate further study and research among those who are eager to explore.

The subject matter of the book has been derived from the study of various works of the Siddhas. It is felt that adequate justice has not been made to cull out from the great treasure house further and further information useful to the profession.

It has been often said that the Eastern Physiology begins where the Western Physiology ends and that correlated study of both is bound to pay amply. The system is based upon certain never failing "Laws of nature" and human life, revealed and realised be the learned Yogis.

The study of emotions and the pulse forms part of the work of the Siddha Physician and the whole system is based on a rational and synthetic conception. This aspect is of

special importance and great significance since we hear, even from great authorities in the West of the imperfections and deficiencies in right emphasis in the study of Anatomy and physiological functions. It is no harm in quoting from the "Hindu" a reference to the utterance of Dr. G. F, Walker, Honorary Physician and Consultant, Sunderland Royal Infirmary in the "Medical World".

"It is generally agreed that senior students spend far too little time in acquisition of knowledge of human emotions, conduct and behaviour. They get a very skimpy, scrapy presentation of personal and family health which daily beset future patients. If any knowledge of drugs is imparted to them, it is usually of a singularly impracticable nature. As for knowledge of food stuffs and Diet, senior Students' ignorance of this branch of Biology would be laughable were it not a national menace. The whole structure of education in anatomy and physiology needs a ruthless attack with pick axe and dynamite. The most devastating commentary I have known on modern anatomical teaching is provided by a medical student when he arrives at ward hospital fresh from his anatomical teaching studies confronted by a patient and

wishing to apply his anatomical lore he is inches out in locating the stomach. * * "

Hence the Siddha emphasis on usefulness of the "Thathwas" Chapter IV can be well appreciated. Special attention is invited to the chapters on Tridosha, the Pulse, and the Moral Code for the Physician. Chapter 20 deals with general principles of therapeutics. There are ample materials on children's diseases, Sexual Science, Nursing, Personal hygiene, and Sanitary principles which require proper research and codification, and these points cannot be dealt with in the present volume.

The greatness of its chemistry has been accepted and there are still many hidden secrets unexperimented by the ordinary physician. The wonderful book "Amirthakalaignanam" contains ample references to various minerals and drugs, some of which have yet to be brought into the light of practical experiences. Researches in this direction are urgent and national treasure should not be wasted. When medical research in the West is advancing by leaps and the question of the Riddle of Life— its origin, is discussed, the author hopes that the Siddha view will give a clue to this and many other difficult problems. Only the barest outlines have been indicated on several

useful subjects as the Pulse and the Tri-doshas and the Diet.

There may be mistakes and short-comings in this book and this being the first of its kind, indulgence is solicited.

In certain contexts quotations from modern works have been freely used and as references have been made to the sources, I express hereby my indebtedness.

I beg to be excused for the delay in bringing out the book and it was due to circumstances beyond my control such as domestic calamities.

My most hearty thanks are due to M. R. Ry. V. Rajagopalan, M.A.L.T., F.M.U., Headmaster, Board High School, Erode for the very valuable help rendered in translating the difficult verses, in correcting my manuscripts and in the presentation of the themes. My thanks are also due to Dr. K. Ranganadan L.M.&S., Honorary Physician, Government Hospital, Erode, for his very kind suggestions and advice, and also for allowing the use of his library, from time to time.

THE AUTHOR.



THE AUTHOR.

BIBLIOGRAPHY.

SERPENT POWER—
Arthur Avelon—Sir John Woodroff.

KUNDALINI— Vasant G. Rele, L. M. & S.

PULSE IN AYURVEDA—
Ashutosh T. Roy, L. M. & S.

ANATOMISTS' VEDA MECUM—Wilson.

PHYSIOLOGY—Starling.

PRINCIPLES AND PRACTICE
OF MEDICINE—Osler.

MATERIA MEDICA—Gosh.

Do Nadkarni.

VEGETABLE DRUGS OF INDIA—Sanyal.

THE USEFUL PLANTS OF INDIA—
Major Heber Drury.

QUINZE CENTS PLANTES—
Dans L..Inde-A. Dj. Achart.

A DICTIONARY OF THE
ECONOMIC PRODUCTS OF INDIA—
George Watt. M.B.C.M., C.I.E.

HAND BOOK OF FRESH WATER
FISHES OF INDIA—Captain R. Beaven.

TAMIL LEXICON—University of Madras.

JOURNAL OF AYURVEDA—Calcutta.

PRACTICAL MEDICINE—Delhi.

THE HINDU—Madras, 14-th. Oct, 33,

ENDOCRINOLOGY—Mukerjee.

MADRAS INDIGENOUS SYSTEM COMMITTEE REPORT.

TAMIL WORKS BY—

Agastiar; Bogar; Pulipani; Theriyar; 18 Sidhar'a Nadi Sastram; Romarishi; Pathar-guna Chintamani; Kattalai kothu; Ahmaraksha-mirtham; Chillarai korvai; Anuboga vaidyam, 8 Kantos; Kannusameeyam; Malai Agarathi; Mooligai Agarathi, etc.

CONTENTS.

APPENDIX.

Extracts from and References to Author's articles–case studies--in the Journal of Ayurveda and in the Practical Medicine—

The Hand Book of Indian Medicine.



THE GEMS OF SIDDHA SYSTEM.



CHAPTER I

The Ancient Sciences and Arts.

Those who intend studying any of the ancient literatures or sciences of India, are to know the civilization of the country and its people, who wrote the sciences. The outlook and wisdom of the ancient Hindus were quite different from those of the present generation. The moral code for life was of a higher order than the present. They thought that the physical body was moulded to undergo certain incarcerations for the sins that had been committed in the previous birth, though it represents an extreme view. The physical body and the soul were considered as two different things and the body was considered as the vehicle for the soul. The all-powerful one (God) changes the coats to the soul, as a human being, animal, plant and so on, according to the nature of the deeds that are committed by

the "Soul" while under a certain cover. The human cover is said to be provided with all wisdom and faculties, by which one can do wise and stainless actions, by controlling all the sinful deeds or vices, and attain an eternal bliss and thus cast off the covers which are frequently changed, in one's own life. To attain this object of salvation, the ancient Hindus have invented certain means to attain this end. They are described in their scriptures. Those scriptures are the Four Vedas, Six Shastras, 64 Kalaignanas, 18 Puranas and 96 Tathwas. There are many subdivisions among the above. These scriptures will explain all particulars that are concerned with the world, from the creation to the end, including all that are found on the earth and sky above, their qualities, composition and actions, of what they are formed, their functions, the necessity for their existence, how they are created, how they flourish and how they disappear. Not a single point was omitted from elaborate explanation. What we consider as a useless subject, has also been analysed by them.

The people of this land (India) were the Aryans and the Dravidians. Both of them

were Hindus. So, their culture was derived from Hinduism. The Aryans wrote the scriptures in Sanskrit and the Dravidians in Tamil. These two languages were the original ones, and the others that are found were said to have developed subsequently. If any thing was found in one of the two languages, the one will be translated into the other as these two races were in intimate terms with each other and the one was indispensable to the other. They both were thus standing on a common platform. The laws of the land, called the Manu-Dharma-Shastra, (Lit: The Ethical Code of Manu) were also observed as a common code to govern the two races. There was cultural unity. So long as the government were of the Hindus, the sciences described in their scriptures flourished, and their history proves that they were quite hale and healthy and lived long. By developing the great arts, they were able to perform, what we think "Miracles", that were very common in those bye-gone days, which one could not hope to see again. The 64 Kalaignanas are the different arts. They are detailed hereunder. For instance, by the Yogic culture, one can perform "Ashta Maha-

Siddhi", (8 kinds of great achievements) the super-natural powers, viz.

1. *Anima*: by which one can penetrate into all bodies, so as to make them vibrate according to his will. He can enter into the dead bodies and bring them to life.

2. *Mahima*: by which one can bloat his body to a very large size and comprehend the universe in himself and exhibit through the opening of the mouth, all that are found in the universe, which is said to have been done by Krishna and showed to his mother and Arjuna.

3. *Laghima*: or the lightness—by which one could make his body as light as a feather and float in the air or water.

4. *Garima*: by which one can make himself as heavy as a mountain and he cannot be moved from the place where he is seated or standing by any means.

5. *Prapti*: by which one can predict future events, understand the unknown languages, including that of animals and birds, curing diseases, clairvoyance and clairaudience.

6. *Pra-kamya*: by which one can remain as a youth till death.

7. *Vasitvam*: by which one can tame and subject men, women, animals and every element.

8. *Ishatvam*: by which one can obtain the Divine power.

Thus, a Yogi, through his soul force, can make himself lighter than the lightest substance and heavier than the heaviest, can become as vast or as minute as he pleases, can travel all space, can animate any dead body, can render himself invisible, can obtain all objects, can transform himself into any animal or plant, can also become equally acquainted with the past, present, and future, which we consider as miracles.

The explanation of these acts is beyond the scope of physical body. These miracles are said to be performed through the working with the Ether material embedded in the physical body, This super-sensible substance is said to pervade all space and enter into all bodies. This is called the Astral body by the Theosophists.

Thus, the sciences of the ancient Hindus are far advanced and beyond the scope of the modern material scientists.

In this connection it will be wise to read the sayings of Lord Bacon, found in his book "The Novum Organum" in 1620 A. D.

"The human intellect makes its own difficulties, and hence ignorance and mischiefs innumerable. The entrance into the kingdom of man, founded on the sciences, being not much other than the entrance into the kingdom of Heaven, whereunto none may enter except as a little child.

"The manner of making experiments which men now use is blind and stupid. Men are inclined to turn aside from their experiments for some practical application of them, like Atlanta, they go aside to pick up the Golden apple and let victory escape them, they should seek for experiments of light, not for experiments of fruit.

"It is the peculiar and perpetual error of the human intellect to be moved and excited by affirmatives than negatives, whereas it ought properly to hold itself indifferently disposed towards both alike.

"What a man had, rather were true, he more readily believes. We suffer from the mischievous authorities of systems, which are

found either on common notions, or on a few experiments or on superstition.

"The Glory of God is to conceal a thing, the Glory of the king is to search it out."

It is the Yoga science that teaches the development of the third eye of a man which is situated between the eye-brows into the skull, called Agnachakra, by which one can see the actual working conditions of his internal organs, and it is how the ancient Hindus like, Dhanvantri, Agastya who were the learned scientists, had been able to describe the physiology of the living body. None can describe so without the inner sight. In the dead body, we could not see their actual working or the true colours of the organs or structures.

According to the customs of India, a Siddha, Yogi, Rishi or Sanyasi means a man that has mastered the Vedas and other sciences and arts of the Hindus and he is considered as next to God. Such a Siddha or Yogi is considered as Guru and under whom the younger generation should learn the arts. A Siddha is above all jealousies and vices and he has no selfish motive and can live on meagre food and clothing. The chill, heat or rains will not

affect him. No animal or beast will prey on him. The ferocious beasts and the venomous reptiles will run away from him unless the sage tames them. If any of them approach him with a ferocious intent, they will have to reel on the floor and die before him. Such are the sciences he has studied and mastered and such are his powers. It is those Shastras that are classified below. If all the nations of the world turn their attention to these sciences of the east, every country will be benefited.

The 4 Vedas:

1. Rig, 2. Yajur, 3. Sama, 4. Atharva.

The 4 Sub-Vedas:

1. Ayurveda, 2. Arthaveda,
3. Dhanurveda, 4. Gandharvaveda.

The 6 Angas:

1. Mantra, 2. Vyakarana,
3. Nighantu, 4. Chandopisitham,
5. Niruktham, 6. Jothisham.

The 6 Shastras:

1. Vedanta, 2. Vaiseshika,
3. Pattam, 4. Prabakaram,
5. Purvameemamsa, 6. Utharameemamsa.

The 18 Puranas:

1. Matsyam, 2. Koormam,
3. Varaham, 4. Vamanam,
5. Brahmam, 6. Vaishnavam,
7. Bagavatham, 8. Saivam,
9. Ilaingam, 10. Bowdigam,
11. Narathiyam, 12. Garudam,
13. Brahma Kaivaraham. 14. Skantham,
15. Markandeyam, 16. Agneyam,
17. Brahmandam, 18. Padumam.

The 64 Kalaignanams (Arts):

1. Akkaravilakanam, 2. Ligitham,
3. Ganitham, 4. Vedham,
5, Puranam, 6. Vyakarnam,
7. Needhi Sasthram, 8. Jothida Sasthram
9. Dharma Sasthram, 10. Yoga Sasthram,
11. Manthra Sasthram, 12. Saguna ,,
13. Sirpa Sasthram, 14. Vaidya ,,
15 Uruva Sasthram, 16. Idhihasam,
17. Kavyam, 18. Alangaram,
19. Madhura Palanam, 20. Nadagam,
21. Nirudham, 22. Sathabramam,
23. Veenai, 24. Venu,
25. Mirudangam, 26. Thalam,
27. Athira Pariksha, 28. KanagaPariksha,
29. Rada Pariksha, 30. Gaja Pariksha,

31. Dhasa Pariksha, 32. Aswa Pariksha,
33. Rathina Pariksha. 34. Bhumi Pariksha,
35. SangiramaVilakam, 36. Mulyudham,
37. Akrudavam, 38. Uchadanam,
39. Virhuvedanam, 40. Madhana Sastra,
41. Mohanam, 42. Vasikaranam,
43. Rasavadham, 44. Gandharva Vadham,
45. Paipeela Vadham,
46. Kavuthuga ,, 47. Dhatu Vadam,
48. Garudam, 49. Nattam,
50. Mutti, 51. Agasapravesam,
52. Agasa Gamanam,
53. Paragayapravesam, 54. Athirisayam,
55. Indrajalam, 56. Mahendra Jalam,
57. Agni Sthambam, 58. Jala Sthambam,
59. Vayu Sthambam, 60. Thitti Sthambam
61. Vaku Sthambam, 62. Sukla Sthambam,
63. Katga Sthambam,
64. Avathai Prayogam.

The 96 Thathwas are described in a separate chapter, as they are concerned with the body and functions.

Every science, all arts and crafts were learnt by the Hindus of this land.

These scriptures and sciences embody all that was required for human advancement

in this world and for man's progress in religion and a study of these firsthand will be really productive of lasting benefits. We need not search for the thorns and bushes elsewhere for the sweet smelling roses of ancient sciences afford complete fragrance to the human mind and soul.

The modern translations create confusion and difficulty in understanding the subjects as conceived by the authors and therefore the ancients who wrote them are criticised as superstitious men and their works are considered as unscientific or exaggerated. We may confess that we are still ignorant of many things connected with the ancients and it is only our ignorance that belittles their greatness.

The revival of ancient systems—be they in medicine or moral code—requires a faithful interpretation of the views of the originators of the sciences and such a movement will be useful and indeed is found necessary since modern discoveries still are incomplete and look forward to the ancient works for the missing links.

The Siddha system deserves careful and faithful examination since it has in

itself many principles which may go a long way to supply the defects and deficiencies of modern conceptions.

It is necessary for us to realise that modern researches of the ancient works are of common value, to the humanity and enable us to find answers therein to our many perplexities and doubts. The West owes not a little to the Greek but India has to contribute a great deal to the world's progress. There are large and momentous questions that should engage the attention of all wellwishers of the country and true citizens and statesmen. Infant mortality, infectious diseases, venereal diseases, the question of nourishment and poverty that fight against each other. Diabetes for which the Western system disowns all-perfect treatment, growing population which disturbs the national dividends and create anxiety for the state and the consequent question of birth control etc. Diligent researches and a correct understanding of the sciences of the ancient Hindus such as the Siddha system to quote only one among others, will reveal to us hidden secrets and that may really save Indian Society and generally the world from many a besetting peril.

CHAPTER II

History of the Siddha System.

This system of medicine is said to have been in existence in South India especially in Tamil Districts of the Madras Presidency for the last many centuries from the time of the famous Tamil Sangam, the first. Some are of opinion that this is the oldest Indian system of treatment and others, like Dr. Gananath Sen doubt the existence of the same as an original and separate system since there are many similarities and instances of sameness of theory and practice to show that this was an offshoot of the Ayurveda. Whatever might be the similarity and the rational basis for such a conclusion, it will be difficult to deny to it, its rightful place as a separate system having its origin and evolution since it has certain definitely marked characteristic features which are peculiarly its own. It may be that the system might have been modified or adjusting itself to Ayurveda by contact with North India and Malabar and it might also be possible that the practitioners of the code, as prescribed by the great Siddhas, would have assimilated the good features of other indigenous systems.

lects and erudite men to investigate have been baffled and defeated. Three illustrious Tamil authors have made a reference– Maharishis Sattainatha, Boga and Konkana. The importance of this Siddhic school can be best realised by a study of the quotation in the evidence given before the Committee of Enquiry into the indigenous system of drugs, in 1924. "The eager and earnest desire of the late Monsieur Herthelot, the illustrious French Savant and the Doyen of the Chemical World of the west can be amply satisfied if he is now with us to review, if not to incorporate with his 'History of the Chemistry of the Middle Ages in Europe,' which I present the world with just now, what I have unearthed, unravelled and collated as below after my study and practical research in chemistry for the last 26 years, to present the Chemical section of the Human society, to their wonder and astonishment of the ancient Indian's advanced systematic scientific knowledge in the **synthetic chemistry of the Siddha school.**" Under various heads and in a very analytical manner, numberless Siddhas from the presidential Agastiar have handled and experimented on the materials afforded. "Two among them, Bhoga and

Sattainatha have left keys to their literature as a clue to their cult with philanthrophic motives so that men and the creation may outlive like themselves and attain the beatific end."

It is accepted on all hands that the Siddhas were capable of wonderful achievements. The word "Siddha" means to be ever sure and true, ever ready and ever lasting and a Siddha is one who attains Kaya-Siddhi and beatific end by protecting his constitution from and against diseases--the aim being to fortify the body as the container of the soul for the attainment of happiness. Some of their books and songs show their wide knowledge and varied culture and mastery of many sciences—Astronomy, Astrology, Medicine, Surgery and Alchemy. Their Pharmacopoea, chemistry and metallurgical medicines seem to have been perfected in a wonderful manner to suit their own needs and aims. Their Rasa-Sastra is indeed admirable.

An earnest attempt was made so late as in 1921 to receive the study of this wonderful system and the First Siddha Conference took place in the famous Tamilian town of Tinnevelly, under the distinguished presidency of the

late Rao Bahadur Poondi Appaswami Vandiar of the famous family of Tanjore. 64 Siddha physicians exhibited about 749 varieties of important medicines. The 2nd conference took place in 1923 at Madras, under the presidency of the late lamented Dewan Bahadur L. D. Swamikannu Pillai, whose knowledge and scholarship are indeed a pride to South India. About 90 physicians exhibited about 1892 varieties of medicines, and a third conference was held at Madura in the year 1927 under the presidency of the distinguished Hon'ble Dewan Bahadur R. N. Arokiasami Mudaliar, (Minister for Public Health, Madras Government.) of beloved memory.

All these conferences were held under the auspices of the Tamil Siddha Vaidya Sangam, Koilpatti, Tinnevelly District, with its able and zealous secretary, Swami Virudai Sivagnana Yogi.

A committee under the chairmanship of Hon'ble Sir Muhammad Usman, was appointed and the same reported in 17--2 1923 and again on 1—7 24, fully on the Indigenous systems of Medicines. It is gratifying to note that the recommendations of the committee have been given some consideration.

In Madras, a Government School of Indian Medicine has been working from the year 1925 and the Siddha system is given its rightful place in the curriculum and in the General Indian medicine Hospital.

"There are two noble names which deserve to be remembered for all time with special gratitude. They are those of H. E. Viscount Goschen and the Hon'ble the Raja of Panagal, the broad minded sympathy and extraordinary insight of our Governor, the patriotic statesmanship and the courageous determination of our Chief Minister are, if I may respectfully say so, worthy of all praise. It is to these two noblemen that we, in British India, owe the inauguration of the first school of Indian Medicine under the direct auspices of the Government" says Dr. G. Srinivasmurthi B.A.B.L., M.B. & C.M., the distinguished principal of the Government School of Indian Medicine, Madras.

In the above institution young men receive training and it is hoped that they will receive further encouragement. Local Bodies are trying to encourage the system by opening Siddha Dispensaries.

Still the situation is not yet fully satisfactory. Further researches, more and greater recognition of the value of the system and benefactions to further them are indeed needed and it is the author's prayer that more and more will be culled out from this mine of Siddhas' revelations usefully and scientifically sc that the world's knowledge and methods ol human relief and human welfare may be enriched and the glory of the Siddhas may spread more and ever more.

CHAPTER III

The Embryology.

The first portion of the philosophy of creation deals with the Hindu Gods, and we are not concerned with it. The latter portion of the subject explains how the things that are seen in the world are created. The first thing was Ether from where the air appeared, from air—the fire, from fire—the water, from water—the Earth, from earth—the food, and in search of food, the human beings, the animals, birds and all other living beings found on earth. "As they appeared from one another; they disappear as the original one."

Athuva Thathvam

From food the juices (lymph) appear, from which the blood, from which the flesh, from which the fat, from which the bones, from which the marrow, from which the semen (males) and the sronitha (females)—the female sexual fluid. When the latter fluids combine together, they take the form of a pearl drop with a projection and a hole in its centre and lodge into the uterus. The following is the translation (approximate) of the ancient conception as described in Tamil, relating to the formation of the embryo:—

"The semen (male) and the sronitha (female fluid) thus secreted in the body enter the uterus in the form of the minutest visible atom (or particle) and jump with a force like that which is created when we beat forcibly a big drum forming into a drop (like the one in an eddy) and then a hole in that drop—the gas and the matter forming the foetus.

It is even conceived that the coalescent drop of the semen and the sronitha after assuming the shape, described above, is "blessed by two letters" meaning OM. This means that the Pranavayu and the Vyanavayu keep

the principle of life active in the foetus originated, as the beginning of all life is the display of cosmic energy in human form. If the semen increases the child will be of the male sex, if the fluid of the female sex increases the child will be of the fair sex. If both divide and increase, there will be Twins. If the foetus grows in the uterus from the side of the urinary organs, the child will be dumb. If it grows by the side of the intestines the child will be dull headed.

Before the entrance of the semen into the uterus, the Apana Vayu will be lodged there. As soon as the semen and sronitha combine together and enter the uterus, the Prana Vayu, the Uthana Vayu and the Vyana Vayu accompany them, and the mouth of the uterus will be sealed by contraction and the Apana Vayu that was existing already will come out and remain at the cervix as a sentinel in the vagina.

The Uthana Vayu will look to the growth of the foetus. The Vyanan will be imbedded into the foetus. All these 3 kinds of Vayu will perform the development of the semen and sronitha into a child.

The Growth.

On the first day, its size will be that of a mustard.

On the second day, its size will be that of a cumin seed.

On the third day, its size will be that of a pepper.

On the fourth day, its size will be that of a bean.

On the fifth day, its size will be moulded into a bubble.

On the sixth day, its size will be that of an embelica officinalis.

On the seventh day, its size will be that of an alexandrian laurel.

On the eighth day, the pancha boothas will be lodged into it and five different colours will appear; and in ten days will grow to the size of an egg of a crow.

In fifteen days like that of a hen's egg.—

In the first month, that of a small flower bud of a plantain tree.—

In the second month, take a formation of a mould.—

In the third month, head with its parts marked will appear.

In the fourth month, figure (human) with separation of parts with fingers, mouth, tongue and nose.—

In the fifth month, the ears will be formed.

In the sixth month, the arms will be formed and hairs will grow on the eyelids, brows and head.

In the seventh month, the eyes, mouth, nose, ears will be well developed and the bones will become firm.

In the eighth month, the hairs will grow all over the body and 72,000 nerves, will be formed and there will be life and the nourishment from mother will descend to the child through the top of its head and excretion through umbilicus.

In the ninth month, the life and wisdom will come on, and the nourishment passage on the top of the head will be closed.

In the tenth month, the heat and vayu will be increased and the Apana vayu will deliver the child.

Another Version.

The three gases will exhibit their activities into the matter thus formed.

In 5 days, the above forms into a shape.

In 10 days, the shape will be moulded.

In 15 days, the mould will become egg-shaped

In the first month a pointed edge like that of the corn (Kambu) will be formed in it.

In the second month, the head and back will appear.

In the third month, the hands and legs with fingers to half the size, will appear.

In the fourth month, the feet and nose will appear.

In the fifth month, the navel, ears and eyes will appear.

In the sixth month, the nails will appear.

In the seventh month, the hairs, bones and nerves (narambu) will grow. A body with its passages for urine and faecal matter with pulsation and breathing will be formed.

In the eighth month, the connection of nutrition from the food taken by mother will be

established, like a stream, on the passage through the top of the foetus.

In the ninth month, the vocal mechanisms will be developed, and wisdom will begin. At this time, the child will pray the Creator to bless.

In the tenth month, the blessings of the God of Wisdom called "Guru," will be conferred.

Soon after this, the child will take a downward course in the uterus and descend. Then the child will be ejected out of the cavity by the gas Apana Vayu (Co) when the child will forget all that was thought by it in the uterus, and weep with the knowledge of the universe by attachments of the mechanisms of the soul, and other 96 kinds of Thathwas.

This is how the pregnancy is passed in uterus according to ancient Dravidian conception.

If the Pranavayu travels on the right side, the sex of the child will be male;if on the left side female sex; if it passes on both sides,a eunach If no dosha affects for 2 hours at the time of gestation, and the particular dathu that should

be active at the time for the parents (as will be seen in the Tridosha theory) the child will live for 100 years; if it is not so, the age of the child also will be comparatively less. If the Vatha dathu is increased than normal, extra organs or limbs will be formed; if appears tottering, the limbs will become short, or the number will be less. The characteristics of the constitution of the parents that are formed at the time of sexual intercourse, will be assigned to the child as well. At the time of gestation if Vatha is active, the child will bear the colour of the Earth. If the character, mind and the vatha dathu of the parents are equal, at the time of sexual intercourse, the child will be very intelligent. If the above 3 qualities simultaneously disagree, the child will be short-lived. If the moolagni (the heat in the rectum) is excessive to both husband and wife, during intercourse, the foetus will be abortioned.

The Nourishment of the body.

The food taken in will be formed into faecal matter, urine and blood in 12 hours. In 24 hours, the faecal matter and urine will be excreted, and the blood only will remain into the body. One-seventh part of this blood will

be formed into sperm. The remaining blood will be kept spread up for 7½ Naligas(3 hours) in each of the 7 kinds of dathus.

The body will be enclosed with two doors, viz, the acts to perform good or evil. The back bone will be the roofing centre, the ribs on the sides of the chest will be tied up with the nerves and formed into a roof, the mud will be prepared with the water, the blood, and a wall will be raised and the roof will be protected by a mat of hairs, and the nine holes in the body will be the doorways, and the chief door way, the mouth will be supplied with bolts of teeth, and the tongue will be installed to produce noise, with Panchendrias.

From Moolathara to Agnai, there will be 11,000 big nerves and 18,000 small nerves. In the arms and legs there will be 7000 big nerves and 12,000 small nerves. In the navel region, there will be 1000 big nerves and 2000 small nerves. In the 9 holes there will be 1500 big nerves and 3500 small nerves. In the extremities there will be 3000 big nerves and 600 small nerves. In the bones and intestines there will be 7000 small nerves and thus the total number of nerves will be 72,000.

The following conception of the growth and life history of the human body in the age allotted for man's span of life will be of interest:—

The total age normally allotted is 100.

Till the 10th year, childhood and boyhood.

Till the 20th year, youth.

25, 30, 40 years, Eouvana or manhood.

45, 50 years, the climax of manhood having been attained, the beginning of the downward progress. The Bhootha 'Earth' begins to dissolve and partake more of the properties of water Bhootha (Appu) with the beginning of dimness of vision.

60, "Appu" coming close to "fire"

70, "Fire" to "Air".

80, "Air" to "Ether"

90, "Ether" to "Athma".

100, "Athma" to its origin.

The body will contain 3½ crores of hair roots or holes. The breathings will be 21,600 a day; and 96 Thathwas, 390 palams of flesh. ¼ measure of pitha, one measure of kapha. In such a body, the Pranavayu will come out of 12 fingers long, of which 4 fingers will be wasted

and 8 fingers will submerge into the body and rear the Saptha dathu, viz:-

Juice, blood, flesh, fat, bone, marrow, and sperm.

The body will function with Vatha, Pitha and Kapha. The Vatha will nourish the body for the first 30 years, the Pitha the next 33 and Kapha the last 37 years.

The Aryan conception of the Embryology.

Extracts on the formation of the foetus:-

The seminal fluid is cold and the menstrual blood is hot. All the creatures are formed by their combination and they rest in them. Heat is eliminated from the body of the male and the female by the Vayu. The semen is secreted by Vayu and heat into the female organ of generation, where it meets the female germ and forms the foetus which is lodged inside the uterus.

Signs of Pregnancy

Weariness, uneasiness, thirst, heaviness in the thighs, stoppage of discharges, flushing of the vagina, black discolouration of the areola of the nipple and of the lips, excessive

growth of the public hairs, continuity of the eye brows by the growth of hair, anorexia, vomiting, dislike even for good smell, salivation, acid foods tasty, lassitude, milk in the breast, feet appears wollen, elongation of the vaginal canal or its orifice.

Duties of women after conception

When the above symptoms appear, she should abstain from severe labour, fastings, eating insufficient and less-nutritious diet, foods that are undigestable,too sour or too hot, liquor in any form, and meat; sleep during day time, night-keeping or late hours, driving in the carriages, and fright; unnatural postures in bed or while sitting, excessive use of oily substances, bleeding, and incline to stop the natural functions of the body. She should not wear red clothes. If any part of the pregnant woman be injured by external injuries, or in anyway affected by the Tridoshas, the corresponding part, the homologous member in the body of the child, suffers in a similar manner. Her desires should be fulfilled, her cravings satisfied, otherwise the child will die by the reflexion of the eccentric Vayu in the womb of the mother. So, if she insists for any

injurious articles of food, such food should be given in moderation and mixed with wholesome articles of diet.

Effects of Unsatisfied cravings in Pregnant women.

If her wishes are not satisfied, the foetus becomes hunchbacked, or maimed, or lame, or idiot, or dwarf, or blind or squint-eyed.

The child suffers from diseases of those organs of sense, the cravings of which in the mother remain unsatisfied. If she expresses a desire to see the king, that predicts a very fortunate and rich son. If she desires for silk or ornaments, a good-looking son fond of ornaments and clothes will be borne. If she wants to see the Sanyasins, the child will be religious and orthodox. If she wishes to see snakes, the child will be envious. The child will be of same character as an animal or bird or fish, the flesh of which she likes to eat.

It has been said that conception, if it occurs on the even days after the stoppage of menstrual flow, a male child will be produced; if it is on the odd days, a female child.

Indications for the sex of the child and twins.

If the milk is formed first in the right breast, if the right eye becomes larger, if the right thigh more bulky and heavy, if she likes objects having names in the masculine gender or sterner sex, if she dreams about the lily, lotus, etc., if the facial expression becomes jolly, and the natural colour brightens, a son is expected. If the signs are opposite, a daughter will be born; along with the signs opposite to a male sex, if the mother faints, timid, anxious, unskilful, restless sympathetic, heavy feelings on the lower parts. and feeling that her joints are loose, a girl will be born. If the sides of the mother's body become raised, and the abdomen points forward, in addition to the previous signs, an eunuch will be born. If there be a sulcus in the middle, a twin will be born.

Origin of Organs.

In the foetus, the spleen and the liver are formed from the blood. The lungs are developed from its lather, and the appendix from its excretion. The essence of blood and phlegm when boiled by the bile, and set in motion by the Vayu, form the intestines. The

essence of the products of digestion of the dhatus when moved by the Vayu forms the bladder and anus. The tongue is formed of the essence of phlegm, blood and muscles. The Vayu being heated enters the flesh through the vessels and transforms it into muscles and tendons. The vessels become transformed into nerves and ligaments, if they be united with the oily parts of the fat. The vessels are formed of partial, and the nerves and ligaments of complete, assimilation. During the conception of the body, the dathus remain in distinct places—and these develop into the particular receptacles of the particular element By the union of the blood and fat the kidneys are formed. The Scrotum and testicles form by the combination of the muscles, blood, phlegm and fat. The heart is formed of blood and phlegm. All the vessels bearing life stream originate from it.

Notable remarks.

1. Six months embryos are the last that live when born.
2. Only as long as the child is within the womb, does the womb enlarge.
3. As long as it is not born, it breathes in accord with the mother's breath. Only

after being born on the earth the child breathes the atmospheric air through the lungs.

4. The vessels of the umbilical cord are at birth, two arteries and one vein. The cord is a triple one, because food is three-fold; moreover the father and mother are two and that which is born is a third. Hence it is a triple cord.

5. Delivery takes place generally in the 9th month, but it may be prolonged to the tenth month, and rarely to the eleventh or twelfth month.

6. During the fourth month, the foetal heart is formed and thus the pregnant woman becomes possessed in her body two hearts.

7. In the seventh month, all the parts of the foetal body become fully developed and the mother assumes an anxious and weary appearance.

8. In the eighth month, all the parts of the foetal body becomes restless and full of oja, the element of vitality; an exchange of oja takes place from the mother to the foetus and vice-versa. So, the mother becomes blanched and flushed alternately. In

this month the oja is very volatile. Tho mother should be properly nourished in this month. This is a very important month rather a critical period in the life of the pregnant woman.

The oja, is strictly, to be termed as the very life itself. In the eighth month, it has a constant movement from mother to foetus. So, if a woman delivers when the oja is in the body of the foetus, the child will live and the mother will expire; and if it is vice versa, the child will die, and the mother survives.

This phenomenon is generally known to the Hindu ladies. When they happen to know that a woman has delivered during the eighth month, they at once question if the mother and child are alive; and they rarely expect the child to live.

This rare phenomenon is not at all known to our friends of the west.

Somehow or other, the lay woman, guesses that a child born on the seventh month will live.

It is always considered as a period of terror in the Hindu society, the beginning of

the eighth month, after completing 7 × 30 days. (210 days) Somehow the oja phenomenon is understood by them.

(It is superfluous to describe here the placenta membranes, the Amnion and chorion etc., as the ancients have found out more than all these, in their embryology, and they have described all the minutest points.)

DR. GIRINDRANATH MUKERJEE,
B.A., M.D., F.A.S.B.
(in the Journal of Ayurveda September, 1930)

What is Oja?

Oja is also called ojus.

In the Hindu prayers, it is mentioned as Ojosi, Sahosi, Balamasi, Brajosi and so on. Ojus is Thejus, meaning the lively glowing expression of the entire body including the internal organs and the external. In the dead, the external parts, or the muscles etc., found inside, do not show a lively expression. Naturally the blood, that nourishes the entire body carries the lively expression to all organs.

It is this liveliness, that the mother sends through the umbilical cord where the

arteries are connected, from her living body, in the beginning of the eighth month, and tries to give her dear child her life. As the days advance in the eighth month, she is able to gradually establish this vitality in the child without any harm to her body. The catastrophe happens only, if delivery occurs in the early days of the eighth month. Both the mother and child may live if sufficient number of days are passed, say after a fortnight in the eighth month.

The practitioners of midwifery, according to the west, generally conclude the sudden passing of the mother during the early periods of the eighth month as one of sudden shock or heart-failure, and of the child as anything else, and bury the dead who will tell no tales.

There is still another point that requires elucidation.

The spinal cord extends to the middle of the brain. The brain has got a heart-like mechanism in it, and corresponding to it, the skull bone of the foetus has got a gap and the bones are not united. There ought to be some reason for not uniting the bones there and for the existence of such a big gap.

The philosophers say that the spinal cord is also gaping in the foetus at that centre corresponding to the top of the gap of the skull in the foetus.

Some of ths Tamil philoscphers have pointed out that the foetus in the womb is fed through the top of the head and excretes through the umbilical cord.

The umbilical vein and arteries are fully established with their functions only from the 4th or 5th month. How the nourishment is carried to the child before these months? The vague expression, feeding by placenta is not enough.

The child probably gets nourished by some vital elements through the top of this gap on the skull, through the pores of the undeveloped skin tissue, and manufactures the brain substance, and nerves, as a first measure of development. It is also found that the double heart beat is heard only in the 5th or the 6th month. So,the foetal blood circulation commences only at this time, and thus nourishment through blood directly establishes only in this month. Probably till the 6th month, the nourishment is absorbed through the skull gap, and

may or may not continue after this period. Perhaps on this basis, the Tamil philosophers have written that the feeding of the infant is through the top of the head, and the excretary system is the umbilical cord. These points require further investigation.

Concerning the Ojas, Dr. Ashutosh Roy explains it from various authorities as follows:-

1. That it is a testicular hormone.
2. The finest product of chyle and a most important ingredient of the body.
3. The finest essence of all food principles.
4. If the flow of semen is checked the Ojas is increased and vice versa.
5. It is an energetic substance possessing both heating and cooling properties.
6. It is found in all places in the organism where growth is active, viz , male and females reproductive elements, foetal structure, normal and pathological growth.
7. All actions are performed under its influence.
8. Health and strength reside latent in it.

9. The heart and sympathetic nervous systems are stimulated by this.
10. If deranged there is diminution of natural, bodily and mental activities.
11. If this is completely absent, life cannot go on.

CHAPTER IV

The Thathwa Shastra.

This is a science that explains the functions of the human body, from the cradle to the grave. The principles of the Thathwas add a great deal to the scientific aspect of the Ayurveda or Sidha System.

The Thathwa Shastra is the first and foremost of the conceptions, on which the "Theory and practice of medicine" is based.

Captain. G. Srinivasamurthi, B. A., B. L. M. B. & C. M., the learned Principal of the Government School of Indian Medicine, Madras, says, that "Every system of Hindu thought, is at once Philosophy, science and religion, all in one, and one in all." The medical science of the Hindus, is not exempted from this rule.

A proper understanding of the 96 kinds

of Thathwas are therefore, essential, for an adequate realisation of the Tridosha theory, the examination of the pulse, urine, etc., the etiology and prognosis of the diseases, and also the selection of remedies.

There are 96 kinds of Thathwas, and they constitute the essential functions of the human organism and are at once the cause and effect of our physical and mental well-being.

They are divided into three groups as follows:—The first group contains 30, the second 30, and the third 36.

The original names, christened by the sages, are retained here, so that the use of modern terms, may not lead to confusion.

The First group of Thathwas 30.

Serial No.	Thathwas.		Explanations.
	(a) Boothas 5.		
1.	Prithive	Earth	*Principal constituents of body.*
2.	Appu	Water	
3.	Theyu	Fire	
4.	Vayu	Air	
5.	Akasa	Ether	
	(b) Pori 5.		
6.	Sothiram	Ear	

7. Thoku	Body	
8. Satsu	Eye	
9. Singuvai	Tongue	
10. Agranam	Nose.	

(c) *Pulan 5*

11. Sabtham	Sound	Hearing
12. Sparisam	Touch	Sensation and temperature.
13. Uruvam	Figure	Sight
14. Rasam	Juice	Taste
15. Gandam	Smell	Fragrance.

(*d*. *Karmenthriyam 5*.

16. Vakku	Mouth	Speaks with the aid of Akash
17. Patham	Foot	Moves with the aid of Vayu
18. Padhani	Hands-	Carries or throws with Theyu
19. Payuru	Anus & Urethra	Excretes with the aid of Appu.
20. Upastham-	Sexual organ	Secretes with the aid of Prithivi.

(e) *Kanmavishaya 5*

21. Vachanam	Speech	Delivers at the instance of Akash

22. Gamanam	Motion	Move	at the instance of Theyu
23. Visargam	Excretion	At the instance of Ap.	
24. Dhanam	Give & take	,,	Vayu
25. Anandam	Pleasure	,,	Prithvi

(*f*) *Karanam 4*

The subtler aspect of the thought process.

26. Manam	Mind	Thinks. The starting point of thought process about objects and articles in the world by Vayu.
27. Buddhi	Knowledge.	Differentiates the thought process and reveals the diverse aspects of a subject determines the realities and implications by Theyu.
28. Agankar	The Passion to posses	Stimulates and rouses the process by progressive stages-creating a further desire to know more and more by Prithivi.
29. Chitham	Will	Conclusion of the processes defined above, resulting in

complete action-by Appu.

(g) *Arivu.*

30. Arivu	Wisdom	The summation of all thinking process. Being in tune with the Akasa, partaking of its nature, at the vantage ground of eminence examining all matters, resulting in discrimination between the good and the bad.

The second group of Thathwas 30.

(a) *Nadi, 10 Nerves.*

1. Idakalai	*These are dealt with seperatly*
2. Pingalai	
3. Sushumna	
4. Singuvai	
5. Alamburudan	
6. Gandhari	
7. Athi	
8, Alambudai	
9. Sangini	
10. Guhu	

(b) *Veyu, 10 Gases.*

11. Pranan

12. Apanan 13. Vyanan 14. Uthanan 15. Samanan 16. Nagan 17. Koorman 18. Grikaran 19. Devathathan 20. Thananjeyan	*These are dealt with separatly*

(*c*) *Asayam 5.*

21. Amarvasayam. Stomach
Where the food (liquids and solids) lodge

22. Bagirvasayam. Duodenum
Where they are separated.

23. Jalavasayam. Bladder
Where che urine is collected

24. Malavasayam. Rectum
Where the faecal matter is collected

25. Suklavasayam. Testicles
Where the sperem is collected

(*d*) *Kosam.*

26. Annamayakosam. The physical body that is sustained by food against decay

27.	Pranamayakosam	The pranavayu and the organs of action and sense that constitute the subtler body;e.g., leading to the subconscious stages in sleep and dream
28.	Manomayakosam	The mind in combination with the organs of perception combine to constitute the subtler forces creating life activity and the causal principles of life activity.
29.	Vignanamayakosam	The Buddhi and the Poris (organs of sense perception) referred to above, function together in combination with the subtler body— even in dreams.
30.	Anandamayakosam	The source of supply and protection;supply of energy to the body: the combination of Pranavayu and sushupti, the basis of Karana body.

The third group of Thathwas 36.

(*a*) *Adharam 6.*

1.	Mooladhara	Pelvic Plexus.
2.	Swadhishtan	Superior Hypogastric. Plexus.
3.	Manipuragam	Solar Plexus.
4.	Anagatham	Superior cardiac Plexus.
5.	Visuddhi	Superior cervical ganglia.
6.	Agnyai	Ganglia of Ribes.

(*b*) *Mandalam 3.*

7.	Agni	Fire	Situated above the Mooladhara and below the Swadhishtan, looking like three fold flame downwords.
8.	Aditha	Sun	Between manipuragam and anagatham, semicircular' ring, about four finger space, above the navel region on the spine.
9.	Chandra	Moon	Above Visuddhi and below the Agyai in the centre of the brain full of brilliance and shining like thou-

sands of moons and suns, the seat of the fundamental principle of life energy itself "Amirtakalai." This corresponds to the Basel ganglia.

(c) *Malam* 3.

10. Anavam	Selfishness.	Love of self and things connected with self.
11. Mayai	Jealousy.	Illusion, attachment to unreal things.
12. Kamiam		Greed and desire for all things of the world.

(d) *Dosham*.

13. Vadham	Creative force Vayu, originating in Vayu, the action of Pranavayu, leading to the coalescence of the two Boothas of fire and water (with limitation.)
14. Pitham.	In the direction of the Agnimandala, the action of Vayu and

water elements permeating and assimilated in the heart leading to Pitham,

15. Kapham. — Appu, Vayu and Theyu, always acting together and at the same time not becoming extinct, as separate elements or principles, the controlling and directing energy being in kapha.

Note:—	A	B	C
	Theyu	Appu	Vayu
	Fire.	*Water.*	*Air.*

With Vayu as the originating force. A and B are affected, resulting in Vatham.

With A. as a subsidiary element, B & C result in Pitham.

A, B and C join apparently and work cumulatively resulting in Kapham.

For purposes of convenient classification and identity, the symbols A, B & C are given.

In reality the interaction of these agents or boothas under the propelling force of Prana-

Vayu results in the formation, and active accumulation of three Dathus.

(e) *Edani* 3.

16. Ardha	Aspire for	wealth.
17. Puthra	,,	children.
19. Ulaga	,,	worldly things.

(*f*) *Gunam* 3.

19. Rajasam	Vindicated in kingly and noble qualities, e.g.Charity, chivalry, egotisem of a high-order, desire for glory and success in war, passion for know-ledge and truth.
20. Thamasam	Cunning, wrong dis-putes, laziness, sleep, anger and gluttony.
21. Sathveegam	Humility,love,wisdom, self-discipline, grace, piety, penance, love of higher self, truth and justice.

(g) *Vikaram* 8.

22. Kamam	Passion.
23. Krodham	Hatred.
24. Lopam	Miserliness.
25. Madham	Haughtiness.

26. Machariam Animosity.
27. Mogam Illegal love.
28. Idumbai Indifference.
29. Asooyai Envy.

(*h*) *Vinai.*

30. Nalvinai Good deeds.
31. Theevinai Evil ,,

(*i*) *Avasthai.*

32. Sakiram	Lodged in the brain region.		
33. Soppanam	,,	Neck	,,
34. Sushuthi	,,	Heart	,,
35. Thuriam	,,	Navel	,,
36. Thuriatheetham	,,	Sexual organs.	

Note:—

Sakiram is an experience, formed of Sound, Touch, Sight, Taste, Smell, Speech, understanding, Charity, excretion, happiness, thinking Intelligence, haughtiness and will, as 14 departments, at its command.

When these 14 actions submerge into the last 4 kinds during sleep, in the neck, what is forgotten as a dream, will be called *Soppanam*.

When the Soppanam, qualities submerge into the two last actions in the heart, it will be *Sushuthi*.

When Sushuthi qualities turn into one or the other and found in the navel region is called *Thuriam*.

When all the 14 qualities are absent, the Athma will slumber in the Mulathara and then it will be called as Thuriatheetham.

These are experiences, necessary and physically inevitable and they illustrate to us, the relation between the body and the mind and psycho-physical basis of human conduct. The loftier and the nobler the experiences, the greater will be the healthy and physical well-being of man.

The basic principles of the ancient Hindus.

Every substance both visible or invisible, animate or inanimate, is said to be formed of Panchaboothas, otherwise called the five kinds of elements viz;– the earth, water, fire, air and ether. They might have been formed by one, two, three, four or five of any of the elements noted above. This is the first principle or idea of a substance.

Secondly, everything is classified into three kinds. Thirdly, these three kinds of

substances, are formed of either, Vatha, Pitha, or Kapha or any two or three together.

The threefold basis of classification is a remarkable feature.

The following illustrations will explain their principles.

1. *The Hindu Gods 3.*

(a) Brahma—the creator—Vatha
(b) Vishnu—the preserver—Kapha
(c) Rudra—the destroyer—Pitha.

2. The Sun—Pitha
The Moon—Kapha
The Earth—Vatha.

3. The Air—Vatha—the gas
The Fire—Pitha—the heat
The Water—Kapha—the cold.

4. *The Doshas are three.*—
Vatha. Pitha and Kapha.

5. *The principal Dathus are three.*—
Vatha, Pitha and Kapha.

6. *The principal nerves are three.*—
The Ida—Vatha—Left Sympathetic
The Pingala—Pitha—Right „
The Sushumna—Kapha—Spinal cord.

7. *The principal gases are three.*—

The Apanan—carbonic acid gas–Vatha
The Pranan—Oxygen—Pitha
The Samanan—Nitrogen—Kapha.

8. The blood contains three kinds of fluids and gases:—

Carbonic acid gas—Vatha
Oxygen—Pitha
Nitrogen—Kapha.

9. The principal divisions of the body are three;—

The head, trunk and the extremities.

10. The body is formed of three:—

The skin, bone and flesh.

11. The excretions are three:—

The faeces, urine, and sweat.

12. The diseases are of three kinds:—

Vatha, Pitha and Kapha.

13. The diagnostic principles are three:—

1. Medical Science
2. Astrological Science
3. Occult Science.

14. The principles of treatment are three:—

1. Medical and surgical treatments with the aid of drugs and instruments.

2. Religious rites, as worshipping God, charity, and the like.
3. Enchantments or occultism.

15. The medicines are of three kinds:—
Vegetable, mineral and animal kingdoms.

16. The gases that follow and develop the embryo are three:—
Pranan, Uthanan and Vyanan.

17. The religious rites are done thrice a day:—
Morning, Noon and Evening.

18. Supply of food to the body is thrice a day:—
Morning, Noon and Night.

Note:—Thus, we see the threefold classification is a unique feature.

CHAPTER V

Pancha Bhoothas.

One of the most interesting conceptions of the Siddhas, as in Ayurveda is that what relates to the composition of the human body. The Pancha Bhoothas what have been referred to in the list of that deserve

special mention and they emphasize the material and physical basis of the human body.

Elements.

Prithivi:—(Earth) The hairs will grow; bones will become firm; skin will become supple; nerves will throb; Muscles will develop. This shows that the bones, skin, flesh, hair, and nadi (the nerves) arteries, veins, and lymphatics are derived from Prithivi.

Qualities:— Bearing, hardness, combining with five senses:- 1. the sound, 2. feeling the touch or sensation, 3. figure, 4. taste and fragrance.

Appu:— The urine will be secreted, blood will circulate, sperm will be ejected out, brain will be maintained in its function and properties, Marrow will grow.

Qualities:— Moulding-softness-combined with the first 4 senses.

Tehyu:— Appetite will be sharpened; sleep will be hypnotised, Fear will threaten, coition and sexual intercourse helped, laziness will twist the body.

Qualities:— baking, heating combined with the first 3 senses.

Vayu:— Running and speed produced, sitting will press down, lying will throw flat,

walking will raise up, standing will keep erect.

Qualities:—Moving, feeling the touch, combined with first 2 senses:- Running, scratching, walking, opening, closing the eyes, and stopping—derived from Vayu. (air)

Akasa:— Passion will grow, love emanates. Feelings, like, haughtiness and anger roused, hatred, miserliness and animosity caused.

Qualities:— The causal connection with feelings combined with 1st sense only.

The following description of Pancha bhuthas, by Dr. H.N. Chattarjee M.A. Calcutta will be of additional use in clearly understanding their working.

"The Akasa (Ether) is evolved from Brahman and also the tanmatras of Vayu, Tejas, Apas and Prithivi. Akasa has the capacity of sound. It is infinite and all pervasive. Vayu emanates from Akasa and has the quality of sparsa (Touch). It is a subtle and gaseous matter."

Tejas evolves from Vayu and contains the energy of radiant heat and light. Apas is formed out of Tejas with the capacity to stimulate taste or rasa. It is a subtle viscous matter.

Prithivi is evolved from Apas with the latent power of Ghanda or smell.

So Akasa has the quality of				producing sound.	
Vayu		„		Sabda & Sparsa.	
Thejas			Rupa,	„	„
Apas		Rasa,	„	„	„
Prithivi	Gandha	„	„	„	„

The 5 kinds of sound which are exhibited by the five bhuthas are differentiated in Panchadesai as follows:—

Akasa has a hollow booming sound, Vayu has sibilant whistling sound, Tejas has puffing, roaring sound, Apas has gurgling sound and Prithivi has a splitting, rattling or crackling sound.

Out of the above 5 kinds of matters, that are embedded in them, different energies remain as different matters in the universe, and all that are found in the universe, including the Sky, Sun, Moon, Stars, the human beings, animals and plants, and all that are found underneath, or above the earth such as the mountains, metals, stones, etc., that are said to number 84 lakhs, are formed by the various proportions of these 5 matters. The chemical formula called Panchkarana of such

a kind of formation may be described as follows:—

Divide each matter into two equal parts, and subdivide one of these parts into 4. One portion of the particular bhuta and one part from the four parts of each of the other bhutas make a Maha-bhuta.

Each of the five matters is individually classified as Suk shma bhutas (subtle) and when they are combined together they are called maha-bhutas or Sthula-bhutas (Gross).

The Sukshma bhutas are homogeneous and continuous, whereas the maha bhutas-have anatomic structure.

Structure of Maha-bhutas.

One atom of Akasa is composed of one half of Sukshma Akasa and one eighth of each of the other bhutas.

One atom of Vayu consists of one-half of Sukshma Vayu and one-eighth of each of the other bhutas.

Similarty the other maha bhutas Tejas, Apas and Prithivi are to be calculated.

The following table will illustrate the points referred to above.—

Akasa (Ether)	Vayu (Air)	Theyu (Fire)	Appu (Water)	Prithivi (Earth)

These are divided into 2 equal parts.

Akasa	Vayu	Theyu	Appu	Prithivi
Vayu	Akasa	Akasa	Akaas	Akasa
Theyu	Theyu	Vayu	Vayu	Vayu
Appu	Appu	Appu	Theyu	Theyu
Prithivi	Prithivi	Prithivi	Prithivi	Appu

It is only under this proportion all the 84 lakshs of sthula (gross) organisms or bodies are formed.

These Pancha bhutas are the different manifestations of Prana or life, and are the results of the cosmic energy. The cosmic energy is classified into several kinds, according to many annotators, as Chith and Sath, Shiva and Shakti, Nadha and Bindhu and male and female energies. By the invisible interaction of these two kinds of energies found in the universe, the Panch bhuthas are derived in the following order, Viz. from Ether to air, air into fire, fire into water and water into earth.

The cosmic energy acts like the sexual intercourse of a male with a female, and the resultant product are the Pancha-bhuthas, as in the case of coition, the semen and Sronitha (the fluid of the female sex derived from the ovarics) are secreted. The products of exhaustion after pleasure.

This shows that the cosmic energy is formed of 2 subtle energies and they combine with one another, and in the course of their activities, matters are produced.

This cosmic energy is continuously going on in the universe, and its source is attributed to the ingenuity and wisdom of the Creator.

It is interesting to note that the ancients without Laboratory experience conceived the composition of the human body rightly and it will be useful for us to remember the description of the human body as a marvellous structure by GEO. BLACK M. B. (Edin) in his work which bears the same name. "The human body and its marvellous structure."

The Elements of the human body.

The human body is composed of the same elements as are found entering into the composition of the mineral substances found on the earth surface. The following is a list of the quantities of the various elements found in a human body weighing eleven stone, or one hundred and fifty-four pounds.

	Lbs.	oz.	grs.
Oxygen	111	0	0
Hydrogen	15	0	0
Carbon	20	0	0
Nitrogen	3	9	0
Phosphorous	1	12	190

Sulphur	0	2	217
Calcium	2	0	0
Flourine	0	2	0
Chlorine	0	2	382
Sodium	0	2	116
Iron	0	0	100
Potassium	0	0	290
Magnesium	0	0	12
Silicon	0	0	2
Total.	154	0	0

It will be seen that the first four elements are oxygen, Carbon, Hydrogen, and Nitrogen. These are non-metalic elements, and enter largely into the composition of all organic beings. No organic being can be developed without these four elements, hence they have been called organic elements. The next elements of importance are, undoubtedly, Phosphorus and sulphur, Chlorine, Flourine and Silicon are non-metalic elements. The rest are metals. Of these Sodium is most abundant, and Iron and Silicon are least.

Neverthless they are necessary. Even the absence of the small quantity of Silicon is accompanied by diseased conditions. Thus

the enamel of the teeth in a healthy condition contains Silicon, but if this is absent the enamel is not properly formed and the teeth quickly wear away and become comparatively useless. The elements, however, are not found in the body in their pure state, but are mixed together forming the following compounds:—

	Lb.	Oz.	Grs.
Water	111	0	0
Gelatine	15	0	0
Fat	12	0	0
Albumen	4	3	0
Fibrin	4	4	0
Phosphate of lime	5	13	0
Carbonate of lime	1	0	0
Fluoride of calcium	0	3	0
Chloride of Potassium	0	0	10
Sulphate of soda	0	1	170
Carbonate of soda	0	1	72
Phosphate of soda	0	0	400
Sulphate of potash	0	0	400
Peroxide of Iron	0	0	150
Phosphate of potash	0	0	100
,, Magnesia	0	0	75
Silica	0	0	3
Total.	154	0	0

The above are the principal permanent compounds found in a human body. Water is composed of Oxygen and Hydrogen, and constitutes four parts of the bulk, and sometimes even more of the whole organic kingdom. Gelatine is composed of the four in organic elements, and is found in the cell walls of the animal tissues. It is especially abundant in the bone cells and in the skin. Fat is composed of Carbon, Hydrogen, and Oxygen. It is distributed over the body in the adipose tissue, and is also found in the marrow of the bones, in the joints and other parts. *Albumen* contains the four organic elements. It is found in the blood, and is the principal substance entering into the composition of the *nerves*. *Fibrin* differs but very slightly from *albumen*. It is not found dissolving in the blood like that substance, but is suspended in it, and coagulates when the blood is allowed to stand. It enters into the composition of the muscular tissue. *Phosphate of lime* is found in the bones. A half part by weight of the human skeleton is composed of phosphate of lime. Carbonate of lime is found also in the bones, in the proportion of about 10 per cent. Fluoride of Calcium is also found in bones of human beings. It is often found

in large quantities in fossil bones, and the quantity of fluoride is said to be a guide to the age of the bones in which it is found. Chloride of Sodiun is found in the blood. It is necessary to the life of human beings, as well as, animals. Its use is universal amongst mankind, and they suffer from disease when deprived of it. Carbonate, Sulphate and Phosphate of Soda are other forms of Sodium which are found in the blood and tissues of the human body. Chloride of potassium, and the same salts as of Sodium, are also found in the body, but they are not so abundant as the latter. A still smaller quantity of magnesia than of the alkaline metals is constantly found as constituent of the human body.

From the above, we can understand that the body contains a large quantity of Vayu (Air) than the other materials In a body weighing 154 lbs, if the gases are deprived, we could get only 4½ lbs of earth materials. This shows that about 149½ lbs of gases of different kinds are contained in a thin baloon of 4½ lbs of earth. These 4½ lbs of earth is only the nerve fibres formed of calcium with a few other chemicals, to keep the fibres pliable. When so much gas is contained in the body,

can any one say that the physiological functions of the body are performed by the glands and nerves. It is quite absurd to be playing with the earth materials for the functions of the body. The physiologists ought to direct their attention to the functions of the gases in the body in future,

CHAPTER VI

Vayu.

Gas or Air.

It is one of the Pancha bhuthas, as earth, water, fire, and ether.

Vayu is a force akin to Electricity. It is cold, dry, light, clear, thin, rough and harsh mobile, piercing, invisible, constantly moving and produces constant currents on the organs of the body.

All the 96 kinds of Thathwas contained in a living body, are functioned by different kinds of gases of which the Prana Vayu is the principal gas, without which no other kinds of Vayus can independently exist in the body and show the expressions of life. When the Prana Vayu departs from the body, life becomes

extinct, and the mass of flesh and bones, and the mere statue of a figure, is thrown down. Readers should note, that the gas is important for the existence of life in a body and not the so called powerful "Nervous system". The nervous systems are only the routes for the gases to travel, and thus circulate throughout the body from head to foot.

The great Saiva Saints who are 63 in number, viz., Sundramurthy, Pattanathar, etc., and the Sidhars, like Kuthambai have said that our body is a mere "Baloon" filled up with air, and it is uncertain to live for ever. Thus the physical body is a baloon of flesh and bone, and filled in with air. It is with this view in mind, we should study the nature of the Physiological actions that take place, in the human body while living.

So the gases guide all the functions, by coming in contact with the various mechanisms made of flesh and bones. The so called "Energy" is only gas. The gases are the various chemicals in invisible form, when they form a solution with watery substances, they are liquid chemicals, and when dried, they form crystals. These chemicals are manufac-

tured in the Laboratories of the body with the combination of foods and gases. The so called cells, corpuscles are the various tissues formed of food materials enclosed with gas, and thus they are only air bubbles.

Somehow or other, the ancient sages of India, have found out the actions of various kinds of gases, and have, given particular names for each of them for identity.

Modern laboratories have isolated certain gases, of definite virtue, but it is still doubtful whether "Oxygen" is Pranavayu. Because, the Oxygen could not revive life in a dead body even though the powerful cells, muscles and corpuscles, the nervous system and all other organs do exist and are in tact in a dead body.

The Dravidian literatures, describe 14 kinds of gases, viz: — 1. Pranan, 2. Apanan, 3. Vyanan, 4. Uthanan, 5. Samanan, 6. Nagan, 7. Kurman, 8. Grikaran, 9. Devathathan, 10. Thananjeyan, 11. Vairavan, 12. Mukian, 13. Andharyami, 14. Pravanjan.

Description according to the Dravidian texts.

1. Pranan, appears in the middle of

Lalada, falls into the Chitra Nadi, jumps as "OW" on Moolathara, knocks the Nabisthana as "AW" wherefrom they enter and follow the Idakalai and Pingalai nadis, and circle the "Kapala", start through nostrils to 12 fingers length, and leave off 4 fingers, and bolt the origin with the remaining 8 fingers.

Thus this kind of action is repeated in the act of breathing at the rate of 360 per Naligai (one hour = 2½ Naligais) and are called Swasams. The day and night comprise 60 Naligais and 21600 Swasams or breathings are conducted in one day and night. The breathings are said to be guided by the Chakras-wheels, called Nerve plexuses, and each plexus guides a certain definite number, as follows:—

Moolatharam	600
Swadhishtanam	6000
Manipooragam	6000
Anagatham	6000
Visudhi	1000
Agnai	1000
Nathantham	1000
Total.	21,600

Of the 21,600 breathings performed, 7200 is wasted away and the remaining 14,400 enter inside the body; 4 Seconds cover one act of breathing e. g. 1. Rechagam, 1. Pooragam 2. Kumbagam.

Breathing is formed of Expiration, Ins-piration and the pause covered by time and called Rechagam, Pooragam and Kumbagam, meaning, spending or wasting, grasping or filling up, and neither of the two respectively. Thus, three kinds of acts in breathing are covered by 24 hours for 21,600 breathings. Thus in one second, one expiration, one ins-piration and two pauses will be found. The pauses or the absence of the inspiration or expiration are found after each one. While we are using our Vocal cords, during a speech, then the Kumbagam or the absence of expiration or inspiration will be found, and the air concentrates its activities on the Vocal cord and this is why, a man should stop his specches, and take breath through the nostrils and resume his speech. The so called "Yoga" exercise is performed by "Kumbagam" i. e. neither breathe "out" nor "in". Then only the chakras or plexuses of nerves that direct the breathings as noted above, the definite

numbers assigned to each of them as normal act, will work in the testicular hormones called "Ojas", and tickles the "Kundalini Shakthi" that lies at the tail end of the coccyx near the pelvic plexus, coiled like a snake, corresponds to the hair spring of a watch, and convert the semen unto a subtle energy and transmit their energy through the finest thread of nerve fibre that connects the brain with the spinal cord, just like the current passing from one end to the other through the solid metal wire connections in Electrical instalations. It is here also the energy is supplied by the Pranavayu and not by the delicate fibre thread, or the coiled spring of Kundalini or the chakras even though all these mechanisms do exist even in a dead body, but only the so called energy which is this Pranavayu, could not be found in the dead. Such being the action of the Pranavayu no scientist need search for the energy in a cell or nucleus of dead body.

The phenomenon of Breathing (Woodroffe)

"The Hindus have long known that breathing is done through one nostril for a period of time, and then through the other.

"The Ida and Pingala, which are connected with the alternate breathing from the right

to the left nostril and vice versa. The first, which is "feminine" and the embodiment of nectar, is on the left, and the second, which is "masculine" as being in the nature of Rudra, is on the right. They both indicate time, and Sushumna devours time. For on that path, entry is made into time-lessness.

"The Mooladhara is the meeting place of the three nerves, and hence it is called Yuktatriveni,

"Proceeding from the Adhara Lotus, they alternate from right to left and left to right, thus going round the lotuses.

"When they reach the space between the eye brows, known as the Agnachakra, they enter the Sushumna, making a plaited knot of three, called Muktatriveni.

"The three after uniting at this point, run separately therefrom and the Ida reaches the right nostril, and the Pingala reaches the left nostril.

"The normal breathing is 21600 times a day. Ordinarily the breath goes forth a distance of 12 fingers' breadth, but in singing, eating, walking, speaking, coition, the

distances are, 16, 20, 24, 30, and 36 breadths, re: ectively.

"In violent exercises these distances are exceeded, the greatest distance being 96 fingers breadth. Where the breathing is under the normal distance, life is prolonged. Where it is above that, it is shortened. Puraka is inspiration, and Rechaka is expiration. Kumbaka is the retention of breath between these two movements."

2. *Apanan*, will be situated in the navel region, and preside over the organs lodged in this region and direct its action downwards. Thus it is guiding the excretory functions of the Rectum, bladder, testicles, and the ovaries and Uterus of the female sex, such as, excreting the foecal matter, urine, semen, menstruiel discharge and push out all the contents of the uterus including the foetus, and without this energy of this gas, there can be no normal deliveries at all.

3. *Vyanan*, is said to remain on the shoulders and follow the 72000 nerves that are spread all over the body. and conducts the organs of locomotion, the sense of touch, and fills up the various internal and external parts

of the body with the nourishment derived from food, and also prevents the excessive flow of bile.

4. *Uthanan*, is said to generate the fire called "Utharagni" meaning Utharam-abdomen, and agni-fire that is required for digesting the food taken in. This can be conveniently termed as a baker and sells the baked bread to Vyanan, who carries to the hnngry organs.

5. *Samanan*, is said to keep the rest of the gases in equilibrium, removes the injurious materials from the water and food taken in and hands over for the supply of the body.

Perhaps this action precedes before handing over to Vyanan by Uthanan.

6. *Nagan*, is said to produce Hiccough and vomiting. These actions show that it is situated in the stomach and Oesaphagus. In different literature, it is stated that Nagan will perform the acts of straining, laziness, tonic contractions, Hiccough and swellings and the power of understanding, sight, opening the eyes and to make the hairstand erect on their roots.

7. *Kurman*, is said to perform the

acts of laughing, and yawning and the cheerful expressions of the eyes, face and body by remaining in the mind.

8. *Grikaran*, is said to be remaining between the eye brows into the corresponding cavity of the forehead under the skull and produces weeping, and sneezing with discharges in the eyes and nostrils and also raise up the eye brows.

9. *Devathathan*, will produce anger and laziness, stimulating and running and walking and fighting while awake, and remain in the pelvic region.

10. *Thanangeyan*, is a terrible kind of gas that will not leave the body even after death for three more days. This will remain at the root of the nose after all the gases have left the dead body, and produce the acts of decomposition, such as, bloating of the body, cracks formed in the muscles and acid smell, and on the 3rd day after death, escapes through the sutures of the skull by breaking them open.

No literature explains, the virtues of the normal actions of this gas. But, a very learned "Sanyasi" has explained, this gas will

Tubercular joints, Pthisis and other tubercular affections, asthma, when the vitality of the constitution is low.

12. *Mukkian*: is said to remain under the shoulder joints and keep the muscles and bones of the body erect.

13. *Andharyami*: is said to show the existence of life in the body, by movements of limbs and organs for which the body is said to ride over this gas.

14. *Pravanjan*:— is said to be the seat of life itself(Pranan)who, along with Andharyami, will protect the living body as a side rod and central rod respectively.

According to the Dravidian conception of the Embryology, the Pranavayu follows the semen into the uterus, and the Appanavayu that used to be in it, will come out of the cavity and remain at the cervix and occupy only the Vagina. The Vyanan will be rolling into the cell. The Uthanan will develope the cell. Thus, we can conclude that these cells are charged with the gas, the Vyanan and in consequence all the cells found in the nervous system are the air bubbles formed of the viscous and mobile grey or white matter

found in the spinal cord and seminal fluid and Vyana Vayu. It is in this way the cells have acquired a force. For the further development and increased quantity of cells, the 3rd ventricles of the brain gets the cerebro-spinal fluid called "amirtha" which is converted into white and grey substances and are found into the spinal cord, from which tha cells are formed further

The quantity of cell matter required for development of foetus is suplied further by the fluid from the Ovaries of the mother during the embryonic stage, and after the child is born the testicles or the Ovaries of the infant contribute this, from the nourishment derived from its food; that remains as a subtle energy of the 7th tissue (seed) till maturity--the development of the sexual organs, and fit for secreting the semen or Sronitha.

CHAPTER VII

The Nervous System.

Dravidian Description.

Idakalai, --This nerve begins from the root of the right toe, rises upwards and reaches

the region of the pelvis, where frcm it turns to the left, and runs across the spinal cord in the shape of scissors along with the Pingalai nerve into the cranium and enters the left nostril.

Pingalai,— This nerve begins from the root of the left toe, rises upwards and reaches the same region as Idakalai where from it turns to the right and runs across the spinal cord in the same shape of scissors and enters the right nostril.

Sushumunai,—This nerve begins from the pelvic region and reaches the lase of the skull in a straight line.

Singuvai,—Also begins from pelvic region and reaches uvula and performs the act of deglutition.

Alamburudan,—from pelvic plexus to the Right eye ball.

Gandhari,—from pelvic plexus to the left eye ball.

Athi,—from the same source to the Right ear.

Alambudai,—from the same source to the Left ear.

Sangini,—from the same source to the sexual organ.

Guhu,—from the same source to the Rectum.

The three kinds of important nerves, Idakalai, Pingalai and Sushumunai, pass upwards into the cavity of the brain, together, and reach the nostrils in the shape of a horse's face, at their terminals. These three nerves pierce through the 6 chakras (plexuses) and three mandalas, in their course.

These 10 kinds of nerves are distributed among the various channels and organs contained in the body, viz, the channels that convey food, blood, urine and faeces and the organs that performs the act of bending, straightening, compressing, and bloating of the body, and are spread into 72000 branches, as a spider's net, and in the shape of scissors, in all parts of the body, as if all the organs are tightened up with reins of strings.

In order to fully understand the subject, it is detailed below, the illuminating explanations of Dr. Ashutosh Roy, L.M.S. Hazaribag, Calcutta, on the important subjects required for the purpose of understanding the Tri-Dosha Theory, which is the basis of Ayurvedic and Siddha sciences of medicine.

Brain—Cavity



This figure represents the idea of the Yogis regarding the energies travelling through the nervous system, corresponding to the circulatory system, i.e., impulses travelling from the various regions of the brain to the viscera and vice versa. In many regions both kinds of nerve fibres communicating and distributing will be found enclosed in a single sheath, by dissection. Here they are not shown as found in anatomy, but as they distribute and communicate the impulses.

Those Hindu sages of the past were not only cultured in the medical sciences, but also they were well versed in all the Sastras and Sciences such as, Astrology, Astronomy, the Yoga sastra, etc, described in a separate chapter. According to Yoga sastra, the Agnachakra (Ganglia of Ribes) is considered as the third eye of a man, placed inside the forehead between the eye-brows, and under the skull, which is not developed in ordinary men. But a Yogi has developed this. This ganglia is placed in front of the optic thalamus wherefrom the sight is derived to our common eyes. A Siddha Yogi directs this energy to the ganglia of Ribes, by concentration, and other exercises on the three important nerves mentioned above and on the chakras, directing the Pranavayu backwards obstructing its normal passage. In this method all the other chakras become possessed of certain strange virtues, what are called miracles, and this Agnachakra becomes charged with eye-sight, by which one will be able to look into his own body from top to bottom and observe the functions that take place in a living body. No one can be called a Siddha or Yogi, who has not achieved perfection in Yoga sastra. As none of us could

tell the exact temperature of the body without the instrument called "Themometer" and none could describe or observe the physiologicel actions that exactly take place in a human body, without developing the instrument called the third eye of a man (Agnachakra.)

Such Yogis and Siddhas were living, long ago, and they were regarded.

The plexuses are said to be formed outside the spinal column, which are considered as gross chakras. Arthur Avalon says that there are subtle chakras inside the spinal column corresponding to the gross chakras found outside. The axis of the gross chakras and the communicating portions of the two sympathetic chains meet at the spinal cord. There fore, when the gross chakras function, the reflex action is produced inside the spinal column also, which is but natural. Thus, the statement of A. Avalon is quite possible. In my opinion, the plexuses are only mechanisms formed of nerves, but the so called chakras of the Hindus are the whirl winds, caused in the regions of the plexuses which include the various shapes of nerves with their branches, and the tissues around them by the Pranavayu

that travels through the spinal cord and on the spinal region outside the column along the two sympathetic chains.

Therefore, the gross chakras are the whirl winds that are formed on the plexuses found outside the spinal column and the subtle chakras are the whirlwinds formed inside the spine, on the axis of the gross chakras and the communicating points of the two sympathetic nerves.

The whirlwinds will be formed only when a man is alive, therefore, we are not able to see them by dissecting a dead body. Then the question arises as to the method of finding out these whirlwinds in a living body without dissection, and how the ancient Hindus were able to discover the whirlpools, explained already.

The Idakalai nerve corresponds to the left sympathetic nerve, but the Dravidians conceived that this nerve begins from the left toe, when it will mean that the left Sciatic nerve is the origin of this nerve. This description may be taken as such, because in certain forms of Yoga practice, a Yogi strains the toes for this purpose.

The Pingalai nerve corresponds to the right sympathetic chain but the right Sciatic

nerve also is included as in the case of the former nerve.

The Sushumunai corresponds to the spinal cord.

These are the three important nerves by which 72 thousand nerves are connected.

The rest of the 7 kinds of nerves can be understood as what they are, from the nature of their connections to various sense organs but these seven nerves follow the courses of the three important nerves, Ida, Pingala and Sushumna, from the pelvic plexus intimately and reach the respective organs.

The Aryans and Dravidians seem to have counted the number of nerves found in the body. Some of them state that there are 72000 nerves, others state that every hair is a nerve and that there are 3½ crores of hairs in the human body.

These 3½ crores of hairs may be the out grown or over grown fibres of the nerves. When a man is conscious, if a hair is pulled he feels the pain, which shows that the sensation is communicated from the brain centre, as in the case of other nerves found inside the skin. When a man is unconscious, if the hair be

pulled this expression of pain is not found. Therefore, the Hindus are correct in saying that there are 3½ crores of nerves.

Whatever may be the number, it is to be taken that the three nerves, the Ida, Pingala and Sushumna, are the principal nerves that contribute to the construction of all the structures of the body and its functions, and therefore it is essential to study the Anatomy and Physiology of these three nerves.

The two sympathetic chains, the Ida and Pingala, are situated on the lateral aspects of the spinal cord, outside the spinal column, one on each side. These two nerves begin from the left and right toes respectively, and reach the pelvic plexus from where they cross each other, communicate with the spinal cord, travel up and reach, the ganglia of ribes by crossing the spinal cord at each of the six plexuses and end in the right and left nostrils, respectively.

The spinal cord—the Sushumna is situated into the spinal column. This nerve begins from the lower border of the last lumbar vertibra and ends with the medulla oblongata, in the brain. Thus, this nerve is composed of the grey matter called Chitra Nadi, the central

canal called Brahma-Randra, the fibre of Reissner—the finest fibre that connects the brain with the coccygeal ganglia or Ganglia Impar, that passes through the central canal apart from the outer-white coating of the nerve or its sheath.

It is to the spinal cord, the medulla oblongata, in which the Chandra-mandala (Opticthalamus) and the Amirthakala (the choroid plexus) that secretes the nectar called Amirtha (cerebro-spinal fluid) with a triangular cavity called the Yoni-mandal (the third ventricle of the brain) are connected at the base of the brain.

The spinal cord meets "Kundalini" (ganglia Impar) below.

According to Grey's Anatomy, the two sympathetic chains, (the Ida and Pingala) also meet the Ganglia Impar below. According to the same author, the two sympathetics meet, above at the Ganglia of Ribs.

According to the Dravidian conception, the three nerves reach the Agnachakra as if they were twisted together where from the Ida ends in the right nostril. Pingala ends in the left nostril and the Sushumuna remains at the junction of the two nostrils.

According to the Dravidians, there are six chakras (plexuses) It is considered that these chakras are connected with the above three nerves or are formed of these nerves. It is also considered by them that the chakras are placed outside the spinal column and the organs andViscera are connected to these chakras that are found opposite to them. This shows that several branches of nerves arise from these plexuses and are distributed to these organs. The Chakras are detailed in a separate chapter and as well as in the Thathwas.

Apart from these chakras, three mandalams are said to be found along the courses of these three nerves on the region of the spine.

Agni Mandala (where the fire is generated) is situated from the Swadishtana to the Mooladhara chakra as a three fold flame, from above downwards.

Suriya Mandala is said to be situated between the Manipuraga and Anagatha chakras like a circle- which is considered as the Solar plexus or abdominal brain by Dr. A. T. Roy.

Chandra Mandala is said to be situated

between Visuddhi and Agna chakras, with brilliance.

Next to God himself these Sidhas were possessed of immense superhuman powers. Any command that comes out of the lips of these Sages will be taken as Gospel by the other mortals and will be obeyed, for the reason they possess such marvellous powers. By Yogic culture, one will become possessed with 8 kinds of marvels called Ashtamaha Siddhis. These are explained in a separate chapter. Suffice it to say, that these great sages have explained to us, the Physiology of a living body, from their Yogic culture, which we cannot dream of observing by any other means, known to modern Science. Nct even the X-Rays could photograph the functions of the gases.

CHAPTER VIII

The Chakras.

Literally, a chakra is a wheel, whirlpool, or whirlwind.

"The term wheel is generally applied for a material that has a circular frame or disk

arranged to revolve on axis and used to facilitate motion for various mechanical purposes" (H. W. and F. G. Fowler)

In this case, there is a material formed of nerves attached to the connective tissues of the human body, in various regions of the spinal column and in the brain, called nerve plexus, of various shapes and sizes, wherefrom different branches spring up, and are communicated or distributed with the various organs and structures of the body.

A Plexus is an intricate inter communication between the funiculi of adjacent nerves. The apparent origin of a nerve is where it becomes connected with the surface of a nerve centre. The real origin is where its fibres terminate in the substance of its nerve centre, often far away from where it plunges into the nerve surface (Wilson's Anatomy)

The nerves contain cells and fibres. The cells are formed of albuminous material and the Vyan Vayu. The albuminous material is the Dixons Glycero-phosphate of lime etc. called by Hindus as earth material. This Phosphate of lime is nothing but the stones that are used for manufacturing quick lime or chunam,

which are taken from earth. We find this material in the cells, semen, and the bones. According to the Hindus, it is the semen that forms into cells, and from which all the structures and organs of the body spring up. So, the nerve fibres are formed of Phosphate of lime the bhutha "Earth". All the structures and organs including the bones, are formed of fibres, and these are interwoven to hold the various juices, like that of "Sugar cane" and thus the organs are the bulbous ends of nerves. Therefore, every visible part of the body is formed of earth. According to the Hindu sciences, the body is formed of Pancha bhuthas or the five kinds of elements found in the universe. Out of which, the hardest material is the Earth. So, this contributes to the formation of the whole body. The semen is the seed, and similarly the secretion from the ovaries of the female sex. The food materials are transformed into seven kinds of tissues called Dhathus viz, the lymph, blood, flesh, fat. bones, marrow and semen, in the process of nutrition- of which the last product is the seed, from which the entire body is formed.

It is to produce the seven kinds of tissues and to convert the semen into the

structure of the body, apart from the 96 kinds of functions called "Thathwas", a certain mechanism full of vital energy is required. The nerve plexuses and the vital energy of Prana-vayu are here in the body to perform the above actions. The plexus is a mere structure, with connections all over. The energy is provided by the gas. Prana-vayu travels along this route. When the Prana-vayu meets the various plexuses, a whirl-wind is produced just as we see in the clouds with thunder, lightning and booming sound. The numerous plexuses found in the body are controlled by the six plexuses explained in the Thathwas. The gas or Vayu will pierce through any organ and structure. Therefore, when a whirl-wind is formed in the gross plexus outside the spinal column, the same is found inside it. It is this whirl-wind that is called Chakra by the Hindus, and not the mere plexus of nerves, because the whirl-wind appears like a wheel, moving on an axis. These chakras are possessed of different energies. For instance. the Mooladhara chakra that is considered as a mechanism to deal with Earth material, naturally requires the greatest possible energy for assimilation, is charged witn an energy like that of an

Elephant, according to the Hindus. To suit the modern terms, let us take it as Elephant power. In a similar manner each chakra is charged with different animal energies, noted on each of them, and Sir John Woodroff has illustrated them in a very illuminating manner in his book called "Serpent Power".

According to the nature of energy or power assigned to each chakra, a noise and a lightning is produced there which are transmitted to the organs and structures connected to the plexuses found in the corresponding regions. When we block both of our ears simultaneously, we could hear the booming sound, that is formed as such, of all the sounds together, produced by all the whirl-winds (chakras)

Different sounds are produced in each branch of the nerve that springs from a plexus, and all of them together will be formed into one kind of sound and they are illustrated in the form of letters or words of Alphabets which denotes the sound produced by the palate, when pronounced, (Sir John.) All further explanations on this subject are detailed in the accompanying rough sketches annexed to this chapter.

Apart from the energies like that of an elephant and other animals possessed by the chakras, there are certain kinds of movements in them, called Hakini, Dakini etc, and these are meant that the force of the whirl-wind, is directed forwards, backwards, sidewise or cross-wise and so on, like that found in the loco-motive engine wheels.

The Chakras are not visible and they revolve in the regions noted. When they revolve, not only the noise and lightning are produced, but also the region beneath them are found stained with different colours, owing to the coagulation of the blood in the tissues. Evidenlty, the blood undergoes changes in the different regions of the plexuses, as the Chakras work up with different elements, which are detailed in the annexed sketch.

In conclusion, it is to be noted that the chakras are subtle, and are capable of producing sound, lightning, and colours in the regions. Post-mortem will never reveal these actions. It is only through "Yoga" exercises, one can realise them.

DESCRIPTION

No.	Chakras with their energies.	Situation (Sir Jhon (Woodroff's)	Name of Plexus' (Dr. A. T. Roy)
1	**Muladhara** (Airavatha Elephant power.	Spinal centre of region below genitals.	Pelvic plexus.
2	**Swadishtana** (Makara power)	Sp. centre above the genitals.	Superior Hypogastric plexus.
3	**Manipura** (Ram power)	Sp. cen. of region of the naval.	Solar plexus.
4	**Anahata** (Antelope power)	S. C. of the heart.	Superficial cardiac plexus.
5	**Vishudha** (White Exlephant power)	S. C. of the throat.	Superior cervical ganglia.
6	**Agna** (OM)	Centre of region between the eyebrows.	Ganglia of Ribes.

OF CHAKRAS.

No. of Petals.	Letters on the petals.	Regnent Tatwa and its qualities.
4	Va, sha, sha, sa.	Prithvi, cohesion, stimulating sense of smell.
6	Ba, Bha, ma, ya, ra, la.	Ap: contraction, stimulating sense of taste.
10	Da, dha, na, ta, tha, da, dha, nla, pa, pah.	Tejas: expansion, producing heat and stimulating sight sense of colour and form.
12	Ka, kha, ga, gha, nga, cha, chha, ja, jha, nya, ta, tha.	Vayu: general Movement, stimulating sense of touch.
16	a, a, i, i, u, u, ri, lri, lri, e, ai, o, au, ang, aha.	Akasha: space giving, stimulating sense of hearing.
2	Ha and Ksha.	Manas, mental faculties.

DESCRIPTION

Colour of Thathwa	Shape of mandala.	Bija and its Vahana (*Carriage*)	Shakti of the Dhatu.
Yellow.	Square.	Lang on the Airavata Elephant.	Dakini.
White.	Crescent.	Vang on Makara.	Rakini.
Red.	Triangle.	Rang on Ram.	Lakini.
Smoky.	Six-pointed hexagon.	Yang on antelope.	Kakini.
White.	Circle.	Hnng on White Elephant.	Shakini.
....	....	Om.	Hakini.

OF CHAKRAS.

Other thatwas here dissolved.	Moral and other qualities Remarks.
Smell—organ of Sensation feet (organ of action)	"Source of a massive pleasurable aesthesia".
Task—hand (organ of action)	Credulity, Suspicion, disdain, delusion (or disinclination) false knowledge, pitilessness.
Form and colour Sight, and anus.	Shame, treachery, jealousy, desire, Supineness sadness, worldliness, ignorance, aversion (or disgust) fear.
Touch and feel and penis	Hope, care endeavour, mineness arrogance or Hypocrisy sense of languor, egoism.
Sound—hearing mouth.	Discrimination, covetousness, duplicity, indecision regret, mercy, gentleness, patience or composure, dispassion, constancy, prosperity (spiritual) thrill humility or sense of propriety, meditativeness. enterprise emotionlessness magnanimity, concentration,
Sukshma Prakriti.	

These qualities are said to be associated with the particular branches of nerves that start from the plexuses, individually.

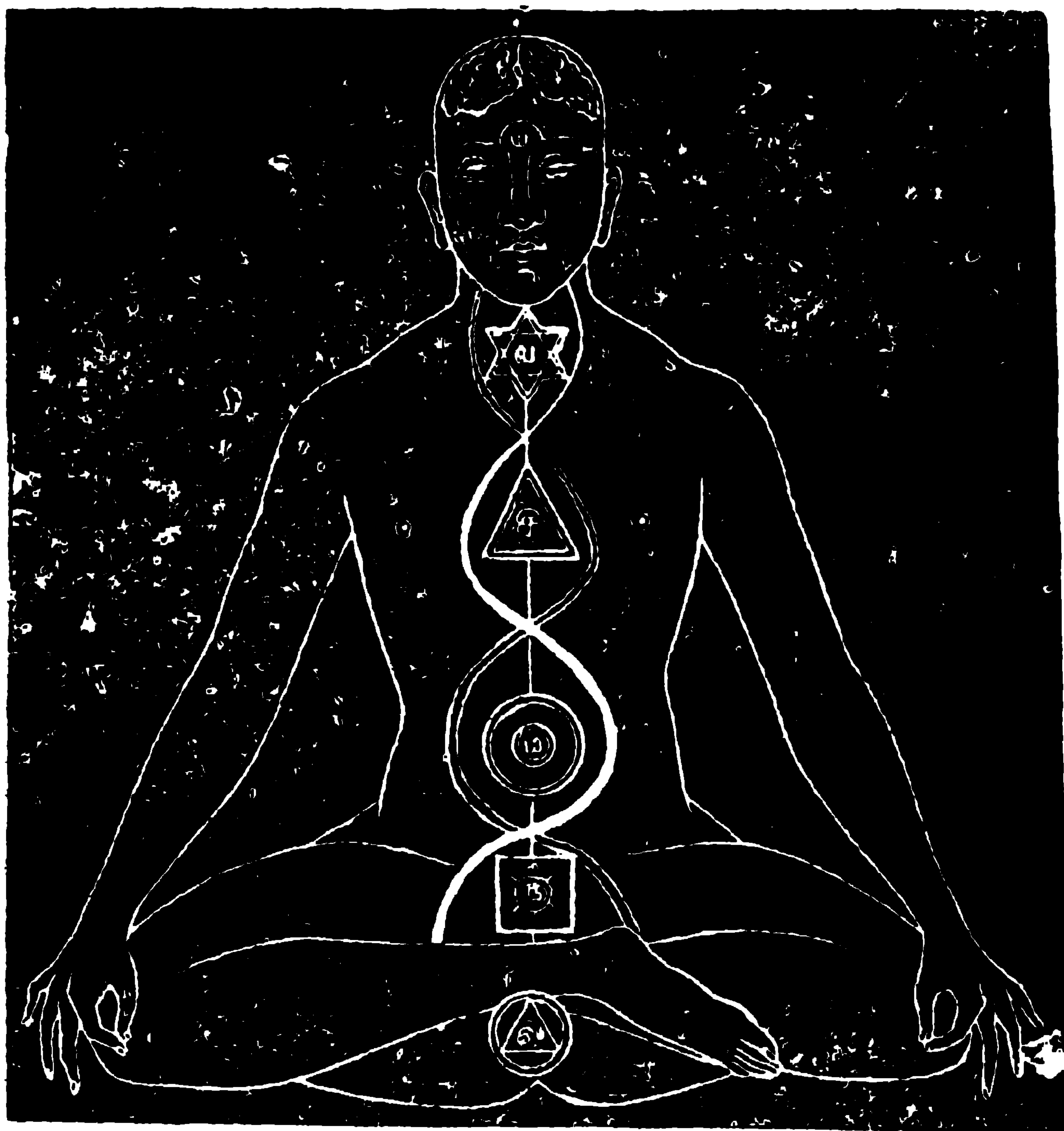
That they exist at any particular chakra is said to be shown by their disappearance when Kundalini ascends through the chakra.

In certain lower chakras, moral qualities appear.. The qualities appear in Swadhistana and Manipura are said to be bad. Those of Anahata are mixed, and those that are above are good.

Kundali corresponds to Ganglia Impar, and it is a mechanism, similar to nerves and plexuses. This is placed inside the spinal column at the coccygeal end and is lying there like a coiled serpent, holding the fibre of Reissner. While the Kundali is placed thus, the Prana-vayu travels from above downwards and conducts the normal Physiological functions. During Yogic exercises, the Prana-vayu is redirected from below upwards, then the Kundali mechanism rises up to a certain height, as if a serpent raises its hood. Then, the actions of the lower chakras are controlled and the virtues of the higher chakras become very powerful. It is then, the Yogi, becomes capable of performing miracles.

To face page—100.

Chakras.



The actual workings of the Chakras charged with respective energies, as revealed by the Yogis or Siddhas. These should not be confounded with the nerve plexuses or the sympathetic nerves, as found by dissection. This corresponds to the appearence of an electric fan in motion. While inactive the skeleton of the frame appears as crude and simple.

CHAPTER IX

Tridosha Theory.

This theory is the foundation stone of the Ayurvedic and Siddha edifice and the doctrine has been a perplexing problem to many a thinker. A right understanding of this theory in all its varied aspects is very necessary for a rational diagnosis and effective treatment. It is the key which unravels the treasures of the Siddha system and opens out new vistas for research in future. The terminology has been imperfect too and the simplicity and the directness of the theory have been marred by a desire (not unknown to many) to interpret this using the language of Western medical vocabulary and to find a justification by asserting that the ancients knew things identical with or corresponding to the terms and objects contemplated in the Western medical terms. This desire, though laudable in some respect, ultimately leads to a confusion of the issues and often takes the student away from the path of the essentials which form the distinguishing feature of the system.

The above observation is based on the authority of the great scholar, Dr. K. G. Se-

Saraswathi, M. A., L. M. S., of Calcutta. He says while giving evidence to the committee on the Indigenous systems of medicine, "The theory of Vayu, Pitta and Kapha was also a great discovery which unfortunately has been much misunderstood by western scholars judging by wrong mercenary transactions rendering these terms as "Wind, Bile and Phlegm. The proper explanation of this theory will take up a treatise by itself."

1. His own conception may be summed up as follows:—

(a) **Vayu**–comprehends all the phenomina that come under the central and sympathetic nervous systems.

(b) **Pitha** signifies the functions of thermogenesis or heat production and metabolism.

(c) **Kapha** means primarily the process of thermotaxis or heat regulation and secondarily the formation of various preservative fluids.

2. By Mr. K. L. K. Vishagratna:

(a) Vayu represents nerve force, function substantive.

(b) Pitha is metabolic and generates body heat.

(c) Kapha is corelated to Pitha and neutralises. excess of body heat.

3. Dr. Ashutosh Roy. L. M. & S.,:

Tri-Dathu the tissues and glandular systems.

(a) Vayu dathu: The nervous system.

(b) Pitha: The katabolic group of endocrine glands.

(c) Kapha: The anabolic group of endocrine glands.

He continues to describe that their harmonious action leads to the preservation of health and the contrary working leads to ill-health. The entry of the morbid agencies into the body is announced and communicated by the Vayu dathu to the "Purush" (Inner Man) which in turn sends appropriate orders to the Pitha or Kapha group of endocrines as the case may be to act and repel the morbic agents either by Katabolic ring or by destroying them.

4. Mr. B. V. Degweker, M. A. M. Sc. L. L. D.,: The Tridoshas are actual substances in the body.

(a) Wat is a dravya a substance or matter and it is a kind of gas and cold to touch.

(b) Pitta is a liquid dravya-slightly oily, and hard to touch, and acid.

(c) Kapa is also a dravya-a substance or matter and that it is like the secretion of any mucous membrane in the system and cold to touch

The chief abodes of the above are stomach, deodenum, large and small intestines.

It is needless to quote many more examples of the opinions held by others in regard to this theory. It is evident that each of the numerous views lays emphasis on the aspect most familiar to the writers concerned and lacks a thorough analysis and grasp of the fundamentals of this theory. Some times the risk is this on account of the divergence of opinions expressed by Indian writers and of the imperfect descriptions of many, western world refuses to believe the salient features of this theory.

A consideration of the Tamilian or Siddha view as described by the Sages of yore

will reveal to us its completeness and usefulness.

The terms Tridathus and Tridoshas have been variously understood. Some refer to the derangements caused in the human body and as the principal agents of these derangements are traced to three kinds of forces, they call them as Tridoshas--Vatha, Pitha, Kapha. Some others think of these as the principal sources of the pulsation in the human body and therefore acclaim them as fundamental in the term Tridathus. It is needless for our purpose to examine these differences of opinion on these points. The principal motions in the human body with all the visible and invisible forces and products may be classified under three kinds of actions or forces and they are referred to as Vatha, Pitha, and Kapha.

It will be useful if we may recall the remarks on the very beginnings of the human body in its embryonic stage and to the very completion as detailed in the Embryology (Chap III). There we see the beginnings of the action of the Prana-Vayu, Uthana, Vyana Vayus and the coalescense of these for the proper maintenance and the protection of the

life principle embodied in the pearl like drops of semen which marks the commencement of the conception falling as it does with a tremendous force with the Sronitha. The energy formation sees its beginning. It leads to gradual growth and development. The Law of all energy is activity and activity means tireless causation of action, physical and whole sale, fresh replenishing of energy and constant display of the laws of motion, vibration and evolution, manifesting itself in perpetual and unceasing motions and reactions. As the body devolopes and grows, the principles of growth and activity continue and in the human system itself there arise certain processes by the very nature of the activity involved in the automatic nature of the cells. Again the peculiar conditions of the environment and work, affect and increase and demand the activities for the physiological function of the body.

It is clear that the nature of the Dathus can be best understood by keeping in view the fundamental basis of all bodily functions.

The whole body the physical frame with all the innumerable cells, nerves, fibrous structures, lung formations, hairs, nails, and all the

Thathwic experiences is the play house of the working of these vital forces wich are engrained in the human system and which are at once the cause and the effect of our very physical existence,

The following (Tamil) views expressed by the Dravidian Seers rendered as they are in imperfect words through a foreign medium will clarify our views and give an idea of the working of the human body.

The effects of Vatha, Pitha, and Kapa are generally to be seen in the pulse at the forehand. (Ref:---Pulse. Chap. X)

Vatha:--- in function depends on Apana-vayu for its medium, courses through the Idagalai nerve, and takes its centre of action below the navel region, working from Mooladhara. Through this marvellous functioning, it affects the nerves connected with sexual organs and the flesh, the bone and through all the innumerable (72000) nerves, enters the very hair roots that are found all over, excretes the sperm, urine, faecal matter, and sweat, in fact all excretions the human system is capable of, are due to the Vatha. It is asserted

that the wakefulness and the movements of the limbs and the body are attributed to the operation of this force, and by the excretions referred to above which are coursed out by the force of the Vatha, the maintenance and sustenance of life are made possible.

Pitha:-- courses through the Pingalai nerve with Prana-Vayu as medium,—permeating in the region above the navel, in a gross and subtle way, traversing up to the kidneys, befriends the Jeevagni originating in the Mooladhara, and finally aids the functions of the heart, and take its stand on the region of the heart. Its effects are visible in the sphere of thinking and emotional life of man--love, feelings, thinking, stages of consciousness and its opposite e. g., giddiness. Its waves reach the head and thence emanate its tangible consequences.

Kapha:— Samana-Vayu is the medium and Sushumna nerve is the carrier of this energy.

Abstracting the vital fluid, the semen, converting it into subtle form of energy and

in and through the waves of this force travels up with a jerking force to Agyna Chakra and transmits its effects, affecting the work of palate and the tongue, uvula, fat, marrow, blood and the colour phenomenon, nerves and bones (the tiniest too) and in short lubricates the joints of bones and the meeting points of all nerves.

Thus the actions indicated are the phenomena of the working of these forces. Shall we suppose these to be the forces in the body? The primary point is, these are the manifestations of the working of the life principle and study of these is necessary for proper diagnosis and treatment.

The Physiology of these is worth noting.

Vatha runs mainly through the Idagalai (Ref. Ch. VII) and the central portion of the creative force is the portion below the navel region; that of the Pitha is below the neck (roughly) and the centre of Kapha is below the head, i. e., between the head and the seat of Pitha is the emanating source of Kapha. The seats indicated are roughly identified for purpose of study. It should not be forgotten that these are only the centres where we can see the

main action and where from proceed the forces of the actions of these, carried along in a rhythmic series of waves. Just as the Idagalai is the carrying way of the Vatha, so also the Pingalai is the high way of the joining of Pitha and Sushimuna is the carrier of the Kapha.

The guiding nerves of these three Dhatus, the region in the body where their predominent creations are remarkably noticeable, the western conceptions of the functions, the gas that responds to the nerve force and their normal functions and abnormal actions and their centres are noted here under:—

Detailed functions of the Tri-dathus and Tri-doshas.

VATHA.

1. Name of the Dathu or Dosha··
   Vatha.
2. The nerve that guides the Physiological action··
   (a) Idagalai—(Hindu name.)
   (b) Left Sympathetic nerve··(Anatomical name.)

3. The region assigned, for the Dathu—
   The navel region.
4. The western corresponding term of the function—
   The metabolic energy.
5. The gas that responds to the nerve force—
   The Apan Vayu.
6. The normal functions—
   (a) The Hindu conception:-
   Spreads on the tissues and muscles of the organs situated on and below the navel region and excretes the Sperm, Urine, Faeces, Sweat etc.,
   (b) Other theories:-
   Conducts respiration, eliminates the urine, faeces, semen, menstrual fluid, and foetus.
7. The abnormal functions—
   (a) The increased energy of Vatha will aggravate the gases, Sannipatha, otherwise known as the grave and toxic types of fevers will be produced. The whole body will become painful. Rheumatism and myalgia will be caused. General weakness,

Colic pains, flatulency, tympanitis, anorexia, and Diarrhea may be caused.

(b) Other theories:—

Obstruction of excretions, abortions and miscarriages and sterility may also be caused. Delayed and difficult labours. Scanty, defective, or excessive secretions of semen, and menstrual fluids. Dysmenorrhea and amenorrhea; tremors of the limbs. Rough and dry Skin, desire for hot things, delerium, hallucination, fluid collections under the joints, atrophy of the muscles and tendons, all kinds of nervous diseases viz:—Paraplegia, and the mental disorders. Fluid collections will be formed by the combinations of different gases situated in the affected regions.

8. The six properties of the aggravated Dosha—

Hard, dry, light, cool, ocillating, and atomic.

9. The counter actions for the above properties—

Sweet, acid, and saltish products.

10. The colour exhibited in the Dosha—
    On the tongue—dark
    on the faeces—dark
    on the urine—clear and white.

PITHA.

1. Name of the Dathu or Dosha—
   Pitha.
2. The nerve that guides the physiological action—
   (a) The Hindu name—Pingalai.
   (b) The anatomical name—the Right sympathetic nerve.
3. The region assigned for the Dathu—
   The middle part of the body (between the heart and the navel region—The thorax.)
4. The western corresponding term of the function—
   Katabolic, Thermogenesis.
5. The gas that responds to the nerve force—
   The Prana-Vayu.
6. The normal functions—
   The Hindu Version:- generates Jeevagni and conducts the digestion of food

separates the Urine through the kidneys and propells the hearts action.

Other Versions:—nourishes the Vital fluids of the body, preserves the Eye-sight, originates intellection and Digests the food.

7. The abnormal functions—

The Hindu Version: when aggravated, affects the Vatha and increases the energy of the gases in the abdomen. Delerium, and mental disorders may be produced. High fever, dryness of the body, Tremor, nausea, dryness of the tongue, fainting, Hiccough, syncope, vertigo, deafness, migrane, acidity of the stomach, indigestion, fever with shivering or rigor, Bitter taste. Hectic fever, and anaemia and chlorosis, remit-tent fever, Urinary diseases called "Premega," Jaundice, cachexia, stran-guary, confusion of thoughts, Vomiting, increased salivation. and burning sensa-tions all over the body.

Other Versions:—excess of Pitha causes Yellow complexion, insomnia, craving for cold substances, loss of strength,

weakened senses, fainting fits, conjunctiva, urine and faeces coloured Icterus and causes suppuration in the different parts of the body.

8. The six properties of the aggravated Dosha—

Green, firey, cruel, liquid, acid and pungent.

9. The counter actions for the above properties—

Astringent, sweet and bitter products.

10. The colours exhibited in the Dosha—

On the tongue } Yellow & Red
on the faeces }
on the urine—Yellow.

KAPHA.

1. Name of the Dathu or Dosha

Kapha.

2. The nerve that guides the physiological action—

(a) The Hindu name,—Sushumna.
(b) Anatomy—the Spinal cord.

3. The region assigned for the Dathu

The upper part of the body above the

chest, the neck and head included, and also the stomach.

4. The western, corresponding term of the function—

Annabolic, Thermotaxis and Thermolysis.

5. The gas that responds to the nerve force—

The Samana Vayu.

6. The normal functions—

(a) *The Hindu Version*:— spreads the mucous coatings over the tongue, uvula, bones, blood, brain, Intestines, eyes etc.

(b) *Other theories*:—lubricates the joints, produces glossiness of the skin, healthy granulations in ulcers, builds tissues, soothes the sensations, produces energy and firmness of the limbs.

7. The abnormal functions—

(a) *The Hindu Version*:—Produces Kapha doshas, Sannipatha (Pneumonia), loss of flesh, body will become pale and reduced, anorexia, cough, vomiting, fainting, Phlegm and Saliva become Slimy, Pain in the chest and its sides. Spasmodic breathing, Respiratory

troubles, fever, profuse accumulation or discharge of Phlegm, and haemoptysis.

(b) *Other theories:*- causes paleness, coldness, and numbness of the body, heaviness of the limbs, drowsiness, languor, a feeling of looseness of the joints, produces sleep, produce pus in various parts of the body.

8. The six properties of the aggravated Dosha—

 Heavy, cool wet or moist, soft, slimy and sweet.

9. The counter actions for the above properties—

 Pungent, astringent and bitter products.

10. The colour exhibited in the Dosha

 In the tongue } Paleness and
 In the faeces } Slimy.
 In the urine—cloudy & frothey.

The mechanism of the Tri-Datus can be briefly outlined though adequate and full description is outside the scope of this hand book.

Grant that the activities inherent in the body are always in full swing and any human

being whether born in the frizid zone or the tropical climates is carrying within himself or herself this big laboratory of electric workings of these potent principles of activity, the generation and regeneration of life forces.

Vatha is having its chemical action in the navel region through the two plexues Mooladhara and Swadhishtana. As indicated in the chapter on plexuses, each plexus is in a booming process carrying and transmiting the energy formation and those two are conducting the effects of Vatha through the Idagalai (Left sympathetic nerve).

Pitha is concerned with the two plexuses (Manipura and Anahatha) and is connected by the Right sympathetic nerve.

So also through the plexuses Vishuddhi and Agyana the Kapha energy is generating and manifesting itself-- being transmitted by Sushumna (the spinal cord).

The effects of Vayu (Vatha) are visibly seen in the excretary functions, as shown in the statement, those of Pitha in digestive and heart actions, and the Kapha are seen in the protection and the regulation of the other two forces.

The characteristic features are noteworthy. Each of the wave of the human system is characterised by the combination of the 3 forces, Vatha, Pitha and Kapha. Vatha and Pitha forces are under the control of Kapha. Vatha is keeping itself in perpetual touch with Apana Vayu, Pitha with Pranavayu, and Kapha with Samanavayu. Again the vayu referred to only indicates the kind of gas with which each Dathu is associating itself and which is at once a manifestation and a cause of the said Dhatu. The work of Kapha is really wonderful because it controls and mingles with these waves at the same time identifying itself and retaining its separate existence and nature. It means every action, nerve, fibre, and structure in the human body, is to be partaking of the nature of the Vatha, Pitha and Kapha. It is conditioned by the very nature of the amount of the preponderance of these products. Kapha sits over the other two Dathus as a rider sits over a horse controlling its actions, identifying him self with the carrier, supplying its impetus for motion and adjusting the motion, speed, and the tramping of the animal. This comparison is not thorough but may be further supplimented by the example of a party whip who drives the

two elements of the group and retains his activity.

The chemical action of the Vatha, Pitha and Kapha, is wonderfully noted. Working through and on and from the plexuses referred to above, Vatha is caused. It originates in the Vayu Bhoota and is fed up by the Prana-Vayu, which on this combination is fomenting the Agni and water boothas which combination and mingling results in the Vatha which is at once a Dhatu or Dosha. In the region of the Agni, with the help of Vayu bootha (Prana Vayu) befriending the Agni so essential for assimilation of food products, Pitha directs its waves towards the heart. The boothas Appu (Water) Vayu (Air) and Theyu (Fire) are worked by and working with the primary forces. The chemical action is assimilated and these are necessary for the proper growth of the human body. These are in perpetual function, each mingling with the two others in harmony which is the result of their merging their natures and permeating throughout the body and at the same time carrying on its identity without actual coalesence without mingling and loosing their individual nature, property, functions, and qualities. Thus Kapha is caused.

Of the pancha boothas referred to (Chapter.V.) Vayu(Air),Theyu(Fire) and Appu (Water) thus supply the motive power for the creation and the permeation of the three Dathus which Boothas and Datus again in close relation to each other, in the course of their perennial activity sustain and keep up the life itself by acting on the earth and Akasa boothas. Any maladjustment and hindrance to the free play of these boothas in action with the Doshas is sure to result in the creation of maladies.

The energies produced by the processes are necessary for the continuence of life itself. Their products are visible in the crude forms and gross matter. It is sad to think that many writers mistake the crude forms for the fundamental Dhatus. Thus the Dhatus work in myriad ways supplying the prop of life in energy forms and also display their exertions in outward manifestations, Kapha in phelgm, Pitha in bile, and Vatha in gurgling winds and wind troubles. Keeping these points in view, we shall detail certain useful conceptions.

Dhatu:--This body is made up of lymph, blood, flesh, fat, bone, marrow and semen which are the main instruments in function. The

Pancha boothas in action are able to assimilate the effects of food products and to live upon energy for the proper function and maintenance of these instruments and for preventing the body from harmful diseases. As a result of the effects of the food, first day the Rasa Dathu (lymph) is touched and becomes saturated and on the second day it is converted into blood, the third day it proceeds to flesh and successively arrives in the formation of semen, and on the eighth day it strengthens the body.

Doshas:- The seven Dhatus being the main props, the body is based on Prithvi (Earth). The Prithvi bootha has inherent qualities of lack of movement and slowness in mobility and heaviness which renders its progress in movement or motion difficult. To put this in working, three other Boothas are required. Appu feeds on the Kapha which is the quintessence of assimilated food products. Theyu lives on Pitha and Vayu on Vatha. These in turn keep up the Dhatus. So the qualities of these three boothas are naturally imbibed by the Doshas (Dhatus)

Kapha, Pitha and Vatha and hence those Dathus may be taken to be forces in the body. Irregular diet, and external conditions of work and living which may increase or decrease the working power of these Dhatus, may lead to derangement and any excess of these forces (by the amount of matter foreign into the body by these and other causes) is thrown out and this process is the indication of the Doshas in swing. They show to us that the Dhatus fight against the incoming of foreign matter and struggles for expelling the excessive matter, are the manifestations (in the cognisable state) of the functions of the Thri-Dhatus. The foreign matters if weak, are easily expelled and if stronger and more powerful, affect the course of action of these seven Dhatus and therefore disturb the equilibrium of the forces of the Dhatus rendering an increase or decrease which act adversely. Then the body undergoes a change in qualities and the results of these changes are manifest and recognised as diseases.

This theory reveals to us certain interesting features about the working of the nervous

system, the cells, and the chakras in the human body. It is true that elaborate descriptions of the mechanisms have not been made in the systematic and exhaustive manner in which experts in physiology have done in the west. But a comparative examination of the principles and the methods of application of this theory with those of the fundamental conceptions in modern Physiology is sure to be productive of immense good. The principles of Tri-dosha and the channels of the operations of these dathus reveal to us very useful conceptions.

The total number of nerves is said to be 72,000. This figure, though exact verification is difficult, enables us to form a good idea about the complexity and the intricacies of the nervous system. All these derive their strength and take their origin and principles of growth and sustenance from the ten important nerves. Of these ten, Idakalai (Left sympathetic and the Left sciatic together), Pingalai (Right sympathetic and Right sciatic together), and Sushimunai (the spinal cord), are the principal nerves. Each is characterised by a specific kind of energy, Vatha, Pitha and Kapha, respectively. Of the other seven,

Gandhari, Athi, Singuvai and Alamburudan, are supplementary channels for the manifestation of Pitha energy and are said to be susceptible to the influence of the same. The other three, Guhu, Sangivi and Alambudai (Vairavan) are additional channels for the display of Kapha and are specially liable to the same. It has been accepted that in all nervous, systems at any rate, of the higher animals arrangements are made for the free supply of oxygen and very short deprivation of oxygen causes a complete block throughout the system. Now, it cannot be doubted that the primary principle of energy or force evolved in the human body is produced by oxygen which in the language of the Siddhas is Prana Vayu. This Prana-Vayu emanates from the central portion of the cerebrum and it owes its activity to the influence of and its relation with what may be conceived as the cosmic energy existing in the universe. There is here a correlation in the range of conceptions between the Physical and meta-physical, both of which were living realities in the sphere of observation and enjoyment by the sages. Prana-Vayu, then courses downwards through the central canal of the spinal cord

begin their work and that work itself starts with the seed of life, viz., the beginning of conception in the womb of the mother the coalesence of the semen and the Sronitha, and directly their work is started, the beginnings of Vatha, Pitha and Kapha energies are made, even as the seed sown in the bowels of the earth draws its principles from the earth, In the soil therefore the Vatha, Pitha and Kapha energies with the five elements create a special stage of their own. It is interesting to note that the manifestation of the energies begins even before the proper formation of the nervous system in the embryo. Therefore the nervous system itself is the vehicle which comes later in the evolution of the figure in the womb and directly an offspring of the three dathus.

Therefore the nervous system itself with all the numerous branches which are in perpetual function is a necessary and natural growth like that of a seed planted in the earth. Recent researches as found in Starling's Physiology reveal to us, the objects and purposes of a nervous system. "In unicellular animals such as Amoeba and Vorticella, there is no differentiation of any structure which can be

regarded as peculiarly nervcus. A stimulus applied to any part of amoeba may evoke responsive activity in other parts. A slight touch applied to any point on a Vorticella will cause an excitation which is rapidly propagated to the stalk causing this to contract and so withdraw the organism from any possible injury. In the lowest mehazoa, such as, the sponges, we find no special nervous structures. The cells forming the sponge may react to changes in environment by contraction or by alteration of their relative positions."

It has been further remarked that "the object of a nervous system is to ensure the co-operation of the whole organism in any reaction to changes in its surroundings."

Again it has been observed that "in the lowest definite nervous system with which we are acquainted that of the Jelly-fish, all three types of cell, the sensory cell, the reactive or central cell, and the motor cell, are already developed and have under-gone among themselves a considerable degree of differentiation."

Then the idea of the more "long paths" and collection of special "central" cells is conceived.

The special cells into closely collected masses (ganglia) are helping "so as to concentrate the control of the reactions of the body and to permit of the ready subordination of every part to the needs of the whole."

These points illustrate to us the varied stages of the developments and differentiations in organisms and animals. The sensations in the body and the reflex actions as a result of the structural basis of the nervous system are conditioned by and excited into action, by chemical changes in the surrounding medium of operations. What the Siddhas conceived, though not so elaborately worded, is similar in principle to the advanced views of modern science. It is clear therefore that the manifestations of the energies of Vatha, Pitha, and Kapha are possible even in organisms where there is no nervous system and it is naturally more definitely traceable in the advanced types of animals, the highest being man himself. Therefore the evolution in the human body of the plexuses and the manifesting centres of Prana-Vayu known as chakras and the coursing of the Vatha, Pitha andKapha, through their respective channels is easily imagined. Further, as is observed in

Starling's Physiology, the concept of certain central cells developing a special sensitiveness "not to mechanical changes in the environment but to the proto-plasmic excitatory processes arriving at them from the sensory cells," is affording the basis for the inference that the idea of the Siddhas pertaining to the working of the Mooladara chakra and the work of the boothas, Agni, Theyu and Vayu which result in the production of gross and subtle forms of energy, is rightly conceived. Recent researches by Mr. A. V. Hill and his pupils refer to the small amounts of heat that are produced when a nervous impulse traverses a nerve. The quantity of heat which is set free during the activity is said to be minute, and it is followed "by the liberation slowly of a further amount of heat 8 to 10 times as large."

This conception of heat waves has already been noted in the conception of the Agni bootha working with other boothas manifesting in Pitha and the existence of Agni (heat) between the Mooladhara and Swadishtana chakras. The modern conception of electrical changes in living tissues is based upon the general law that the material composing living cells and tissues has been characterised "by the

permeation throughout with water containing electrolytes in solution." This has been anticipated by the theory relating to the work of Appu (water) bootha in the body displayed in Kapha energy. The correctness of the theory as conceived by the ancients is amplified by the ideas pertaining to the characteristics of the chemical changes worked by the living cell. The essential condition of all chemical changes in living beings, it has been agreed, is that they takeplace in a watery medium. It is easy to find illustrations to justify the basic principles of the Tri-doshas in works on advanced Physiology but suffice it for our purpose to note the parallels quoted above. The theory of the chakras and the boothas, thus being scientific, it is useful to regard the doctrine of the doshas as one of great import and lofty discovery.

Further with the three dathus the process of digestion and assimilation is carried on. Dr. Geo. Black in his work on the "Human body as a marvellous Structure," has struck the key note, in his description of the true theory of digestion. With apologies the following are his words. "Digestion is a vital process to which chemical and mechanical forces

contribute. While the motions of the walls of the stomach are necessary to mingle its contents and while the chemical solvency of the gastric juice is indispensable, both of these combined cannot produce the true chyme. That chyme into which every kind of food is transformed can be produced nowhere outside of the stomach. In this respect chyme is like other products of the body. We may learn all the constituents of the saliva or the bile; we can produce neither of them outside of the body. That mysterious force which we call vital is the force which determines all. Chemistry and mechanics play their part but the all-determining guiding and controlling power is the life principle."

It is this life principle that manifests itself in the three principal energy forms Vatha, Pitha, Kapha.

The Vatha force is the root of all the forces. It is considered fundamental and all pervading for, as has already been noted, its effects are seen in the work of the numerous nerves, and starting from the pelvic plexus its influence is seen every where. It derives its power and motion for movement from the working of the Mooladhara chakra, which is the basic chakra,

being the earth material (Prithivi bootha). By the mingling of Agni and water under the influence of Prana-vayu, Apana-vayu (CO_2) is caused and affords the medium of the manifestation of Vatha. This Apana-vayu conducts all excretory functions, without which the operations of the body cannot be successfully conducted and therefore the work of Vatha is of fundamental importance and holds the key of operations of the other two dathus. Therefore the common practice of Hindu Physicians to attribute importance to Vatha and to study the pathology, etiology and prognosis of the same. If Vatha fails it is a premonition for the complete disorder of the system, as affected by the other two Pitha, and Kapha. It is interesting to note that the derangements of Pitha and Kapha can be easily rectified when Vatha is sound, and the converse of it is difficult. Cessation of Vatha means, the closing of the life principle-the death. The Vatha affects the work of important glands situated in its main centre of creation as the testes and the prostate, and the secretions of these form a part of the forces and the energy forms carried by Vatha throughout the system. As for Pitha, it is responsible for the work of glands, such as the

Adrenel, Liver, Pancreas, Spleen, and the intestinal juices, and the functions of the heart, so far as its portion is concerned. The Kapha affects the works of the glands in its region, submaxillary, Thyroid, Pineal, Parotid, and Pituitary, and is, as has already been described, protecting and regulating by its properties and functions, the permeation of the energy forms of the other two and affording the basis for equilibrium. Dr. Mukerjee has rightly pointed out that the ancients have got a glimpse of the endocrine glands and their functions.

What is now relevant to our point of view is that, as these three forces are carried out throughout the system, it is easy to establish the interrelation of all the forces, juices, and secretions of glands and any dislocation in any part of the body or in the work of any of these is resulting in not only local affections but also in diseases that disturb the equilibrium of health.

The conception of the Siddhas is therefore synthetic and it is to be understood as such. The whole nervous system is not divided into water-tight compartments but should be regarded as the channel of the

manifestation and working of the life principle. No better authority is needed to illustrate this further than an examination of the composition of blood itself. Wilson's Anatomy notices the existence of gases in the composition of blood. "The blood contains a very large volume of gases partly in combination, partly free. These are Carbonic acid, Nitrogen and Oxygen. They differ in their proportion in arterial and venous blood." "The Oxygen is for the most part in loose combination haemoglogin of the red corpuscles. The carbonic acid is in combination with the salts of the serum, especially with the salts of Sodium. The Nitrogen is suspended in Liquor Sanguinis."

We have already noted that blood being one of the seven kinds of tissues, is marking a definite step in the formation of the building processes, and therefore is partaking of the qualities of the Vatha, Pitha and Kapha. Vatha in CO_2. Pitha in Oxygen, and Kapha in Nitrogen.

It is for this very reason that the ancients have even classified the food stuffs as possessing the respective qualities of Vatha, Pitha and Kapha. Their belief is that the

human organism cannot escape the unerring laws of nature and even the animal, the mineral and the vegetable kingdoms are exhibiting the qualities and the charecteristic features of Vatha, Pitha and Kapha.

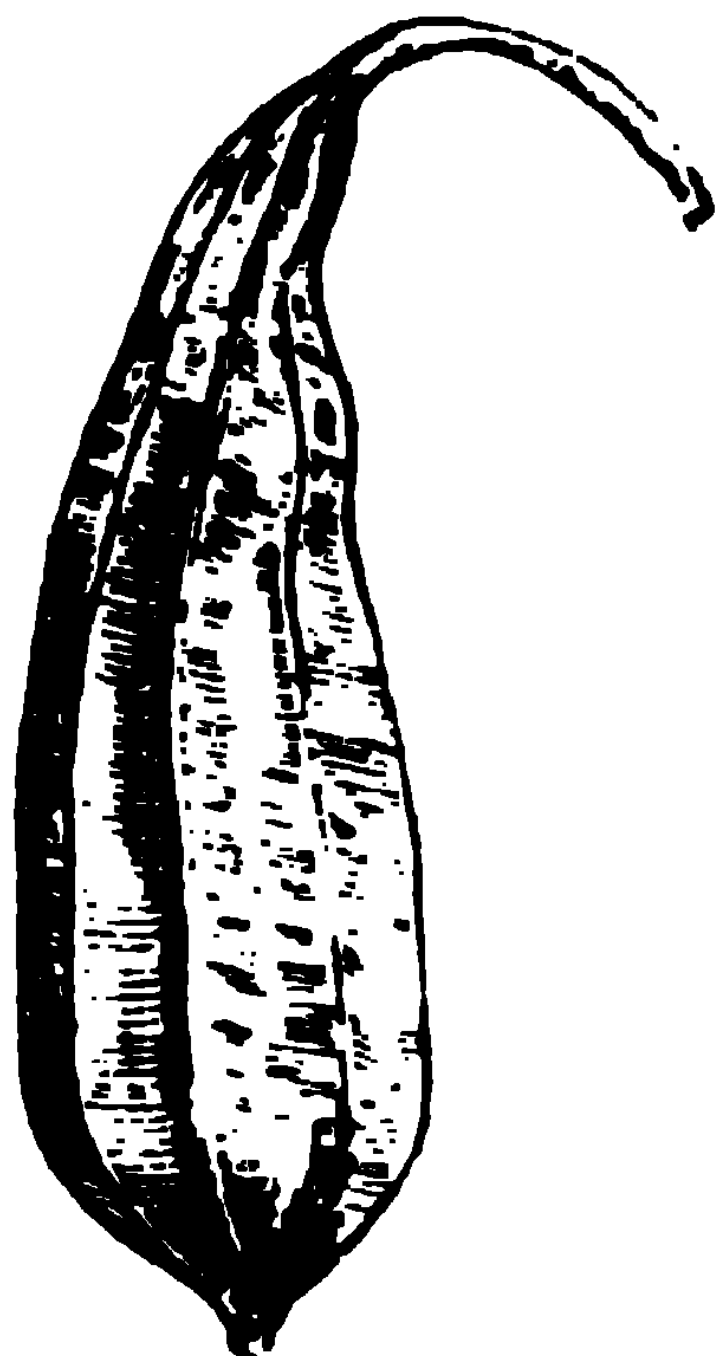
One of the methods by which they have brought home to our mind this synthetic conception is their reference in their songs to the nervous system and the growth of the human body as equal to the growth of the banyan tree which from the seed embedded in the bosom of the earth sprouts into a plant, grows, yeilding many branches and emanating tender shoots which again course down very often to the base of the mother earth.

Another interesting reference is their comparison of the nervous system of the human body and its complex and intricate mechanism, the parts of which are interdependent and interrelated resulting in their subordination to a common effort, to the skeleton of the berries called "Luffa Acutangula," an Indian culinary vegetable (Peerkankai--Tamil), which when freed from its external sheath after riping, presents a picture like the complex interwoven fibres of

To face page—136.

Nervous system.

Luffa Acutangula.



Berry



Pod

The intricate net work of fibres corresponds to the complexity of the nervous system explained by the Sidhas

the nests of certain birds which haunt the inside regions of the wells hanging these nests on the branches of plants grown therein.

These illustrations were probably intended to impress even upon the ignorant mind the wonderful truth that the human organism is complex, intricate, and the functions of the nerves are interrelated and affect in a synthetic way the whole of the body.

This synthetic conception can be further examined in the light of the principles and theories accepted in modern works regarding the "material basis of the body," "the energetic basis of the body" and the laws of hygiene. Such examination is not within the scope of this work, but a reference to the basic doctrines may not be out of place. The proximate constituents as fats, carbo hydrates, and proteins form the material basis. The assimilation of fats, the composition of the carbo-hydrates and the disintegration of proteins, all contain matter that can be easily grouped under Vatha, Pitha and Kapha, and these substances form important sources of energy in the vegetable and the animal kingdoms. Since Vatha is having a preponderance of CO_2, not the mere CO_2, but in energy

forms, Pitha similarly in Oxygen and Kapha in Nitrogen, the work of the bhuthas, Vayu in gas, Theyu in fire, and Appu in water can be better appreciated. It has been accepted even by modern research scholars that the necessary knowledge for making a scientific classification of the bodies based upon the disintegration of proteins is wanting. Again to quote Starling "It is possible that in the future when we know all the disintegration products of the various proteins and the manner in which they are arranged in the molecule, the classification of these bodies will be based on their constitution." The Siddhas conceived that every particle of foodstuff and every stage in its assimilation in the human system should display and affect its own properties into the system. Hence the classification of foodstuffs too, referred to above. Further, the Thathwic experiences referred to, in the Chapter of Thathwas, can be traced to their physical causes and references are not wanting to show the psychical and emotional effects of the Dathus which differ according to the preponderance or otherwise of the qualities of the three Doshas. As has already been seen, the permeation of these energies throughout the body is

the basis upon which the study and treatment of diseases has been made. The question may be asked whether these principles adumbrated above, can be appreciated and illustrated in an exact laboratory, and this problem deserves careful consideration. It may be rightly conceived that much of the literatures may have been last, and further researches are sure to repay.

But the best test of all theories is, does it work? Are its applications successful? Are the medicines and the principles of diagnosis and treatment resulting in tangible good? Is such treatment a true source of relief to the suffering humanity? Can we adjust our ways of living and our methods of cure in the right way with the help of the fragments of science left to us? Does not the theory afford a rational basis for concluding and giving a clue to many, perplexing problems and the newly discovered and yet unrevealed phenomena in the human body? The answer to all these is in the emphatic affirmative. Yes, age-long experiences of Hindu physicians and practical applications of every day life are proofs positive for the merits of this conception. The Tridosha theory takes into consideration the

principles of Biological laws, the Physiological workings, the Chemical processes and their resultant phenomena, the Psychical and Thathwic experiences which are so fundamental, and the physical basis, all of which are effecting in a synthetic way the workings and the activities of the human body. It is a pardonable temptation to presume that we may be right in calling this wonderful conception of the Siddhas as the Laws of Vatha, Pitha and Kapha, just as the Law of Gravitation is an eternal principle that governs the univese. We may safely assert that the human bodies like other bodies, even plants and animals not excluded, are governed by and subject to these eternal Laws of Vatha, Pitha and Kapha. They have stood the tests of many a Siddha of vision and science and it is indeed a marvel that the discovery of these laws was made in this ancient land. Hence the prediction that the many missing links in modern physiology and hygiene may be related and given a scientific place by the careful and wise application of this rich and all pervading conception.

CHAPTER X

Pulse—Nadi (Tamil)

The examination of the pulse has been recognised as one of the principal means of diagnosis and prognosis of diseases in this ancient land from time immemorial. It has become almost an instinct on the part of patients, in this country, especially in the Tamil Districts of the South, to extend their hand to the physician for the examination of their pulse. This habit reveals to us that even the most ignorant person has understood the location and the feeling centres of the pulse waves.

The presentation of the Doctrine of Pulse as conceived by the Siddhas, is indeed a very difficult task. The theories of pulse, as adumbrated in the songs of the Siddhas, though not materially different, are agreed on certain fundamental conceptions. Every one of the Siddhas has pointed out the importance of the Nadi (pulse) and described the methods of observations and treatment according to the working of the Nadi.

The true theory of Nadi (pulse) can be

best understood in relation to the primary conceptions that have arisen in our doctrine of Tri-dosha. The human body as we have seen already, has a material basis, a structural basis, an energetic basis and the protoplasm of life by its very nature and laws of growth and activity as revealed in the working of the Laws of Vatha, Pitha and Kapha, is conditioned for its excitement and adjustment by these very energies.

The term "Pulse" is inadequate to represent the rich conception and the complex range of perceptions and observations which the Siddhas have meant by the term "Nadi." Nadi as has been found in the utterances of the Sages, means more than the thought contents and the experiences in the tangible world of reality as pertaining to the working of the human system, that can be connoted by the modern term "Pulse" with which we are familiar. Nadi is the term that will be used in the references below and it may be taken to be equivalent to the term pulse for purposes of study and identification.

"Nadi" in the language of the Siddhas, is not merely the ordinary arterial beating as the wave that is felt when the physician feels in the

hands of the patients. It is not the perceptible movement that can be traced along the nerves. It should .not be supposed to be the vibration that can be percieved among the 72 thousand nerves, nor should the term be confused with Vatha, Pitha and Kapha. It is the term which indicates to us and unfolds to us the principal, the Vital principle of life, the cause of all life, the source of all energy that is manifest and immanant in all the varied orders of the creation in the universe. The creations in the universe have been divided under 7 heads. Devas, (the beings in the higher worlds) human beings, animals, the flying birds or the winged creatures, the crawling insects, the aquatic multitudes, and the vegetable kingdom. The principle that gives life to and vitalises these groups of beings, animates human beings. It is this principle that pulsates and manifests itself in the human kingdom. It is the manifestation of this when working in the material base with the aid of the structures afforded by the human organism that causes the formation of the three energies and a correct reading of the Nadi should presuppose this basic principle of existence and activity. It is this principle that

can be seen in all the vibrations of the numerous nerves, and that is responsible for the fundamental actions of all the energies. We have already seen that the figure begun in the womb itself is under the influnce of the life principle that is embedded in the drop of vital fluid and the beginnings of Vatha, Pitha and Kapha are made. To emphasise this idea and to enable the physicians to recognise the value of the basic relation with the energy, the Siddhas refer to what they describe as the "Guru Nadi," This Guru Nadi is in ceaseless activity and perforce manifests itself influencing at the same time, the three principal energies Vatha, Pitha and Kapha. These energies are in the perennial ebb and flow in the human system even as the waves of the sea and the tides are in ceaseless motions. The Guru Nadi is always, as a matter of course in ceaseless vibration entering the principal high ways of the energies, spinal cord, (Sushumana)the left and the right sympathetics (the Ida and Pingali) and the three Mandalas or regions, the Agni. Soorya and Chandra, (the Fire, Sun, and the Moon respectively) in the human body. The sphere of its vibrations is not confined only to these regions but

throughout the human frame from top to toe, moving like the blades of scissors in action even as the sympathetic nerves are connected with the spinal cord. It has been noted that the Idagalai and Pingalai and Sushumna all reach the Sahasradala Mandala (the cerebrum) wherefrom radiate the energy forces. This conception is confirming what was described as the synthetic notion of the Siddhas pertaining to the work in the human body. The vibrations of this Guru Nadi are compared to the motions of the swinging of the toy top and to the peculiar sound waves of the noise of the drum, known as Udukkai (a small drum tapering in the middle -- shaped X) and references are ample to illustrate that the Nadi is all-pervading and even active.

The praise of this Nadi has been sung in various verses. It enables the being to make a conquest of all ills when in form. It is responsible for the prevention of numerous maladies and guides and directs the energy processes beneficiently influencing the same. It is supposed to animate and vitalise the myriads of created beings. The essence of the same is partaking of the cosmos which is the cause of all life. It has been referred to as "Athma

Nadi" and "Prana Nadi". It takes its main driving force in concurrence with Jeevagni. It may be safely concluded that Agni Bootha, known as Jeevagni, is the King of all the Boothas.

The measurement of this Nadi cannot but be made with reference to its work as seen in the waves of Vatha, Pitha and Kapha. Vatha is the root of all the forces, since its emanating centre is Mooladara chakra as pointed out in the Chapter onTri-dosha. These energies, as was noted, go to make up and aid the formation of the seven tissues, viz., the lymph, blood, flesh, fat, bone, marrow and semen. And like the unending motion of the waves of the sea which sound and resound reverbrating, throughout the energies are working. The most convenient and perceptible channel of observation for identifying and perceiving the condition of the rhythmic series of waves is the coursing of the blood especially in the artery, since it contains the pure blood which embodies in its composition and circulation the achievements of the individuals as determined by the play of and subjectivity to the three forms of energies, for blood itself contains certain proportions of Vatha, Pitha and Kapha.

Therefore the Guru Nadi in its association with Vatha, in its association with Pitha and in its association with Kapha presents itself in particular forms of vibrations which can be identified and traced for purposes of study. Hence when we speak of Vatha Nadi, we mean the pulsation of the Guru Nadi in tune with Vatha. When we speak of Pitha Nadi we mean the natural and necessary vibrations in connection with Pitha. Similarly the Kapha Nadi is indicating peculiar motions as conditioned by its association with the primary Nadi, i. e., Guru Nadi. The Pitha has another special function allotted to it. It stands on a pre-eminent footing. Its measurement is useful as indicating the general state of health in its relation to Vatha and Kapha and under the influence of Guru Nadi. Besides this it has another function, since the Pitha energy affects even the thinking and emotional life of man. It derives its force by befriending the Jeevagni rising from Mooladhara. Agni is the king of the boothas and the subtle effects of this energy are necessary for proper equilibrium of mind and sound emotional life. Abnormalities of Pitha are sure indications of more than ordinary derangments very often in

mental diseases; and the work of the Boothas can be judged by the state of Pitha. Sound Pitha means a sound emotional and intellectual life which is necessary for proper health. It being the result of the king of Boothas shows the fundamental condition of bodily and mental health and special reference has been made to it as the "Bootha Nadi." This differentiation of the Bootha Nadi revealed in Pitha, lays emphasis as between body and soul. Pitha is thus twice blessed.

All the Siddhas have laid due emphasis upon the necessity of understanding theTheory of Nadi scientifically conceived and he who is able to read and mark the movements of Guru Nadi as the basic vibration is really considered to be the right discoverer. These principles should always be borne in mind when we consider the question of the movements of Vatha, Pitha and Kapha as seen in the examination of Pulse.

The Siddhas have referred to and differentiated these vibrations by comparing them to the movements of certain animals and birds which were familiar. not only to themselves, but also to the humanity as a whole. It is true that there had been no Pulse Tracing Machine

as we find to-day. Their classification of the vibration of the Nadi and its corrolaries Vatha Pitha, Kapha Nadis in terms of the cognisable movements of birds and animals leads us to appreciate their rich and marvellous knowledge of Natural History and Natural life within their range.

The centres of examination.

The following are the regions noted down by the Siddhas:—

The Heel, Legs, Joints, Abdomen, Hands, Chest, Neck, between the Eyebrows, Ears, Nose.

Dr. Ashutosh Roy states in his Pulse in Ayurveda, the following sites for examination:—

At the Wrist the Radial Artery.
At the Ankle Posterior Tibial Artery.
At the Neck—External corotid Artery.
At the Temple—Anterior temporal Artery.

The common practice is to examine the radial artery at the wrist.

Hints: - Stretch the patient's arm and relax the fingers. Place the three middle fingers of the right hand over the radial artery one

finger above wrist, press and release the artery alternately with the fingers, notice the size of the wave as the feeling of a wheat grain found underneath the fingers.

The right hand, in the case of males, and the left in the case of females.

Note:—This practice can be explained by a reference to the conception of the Siddhas regarding the reasons which determine the sex. It has been noted that certain phenomena at the time of sexual intercourse determine the sex. If the husband during the time is having the predominent influence of the "breath range" in the right—masculine, and under the influence of the right testes, the child conceived will be male. Similarly, if under the left range of breath—feminine, and under the influence of the left testes, the child will be female. Therefore the masculine emphasis of the breath range imparts masculine features and the masculine aspect is on the right side. So in the case of males the currents visible on the right arm are bound to give a truer and a more accurate picture of their movements. Similarly the female have their feminine range on the left arm which gives a more faithful picture on their behalf. Hence the tradition of

examining the male in the right hand and the females in the left hand.

Observe:—The wave felt under the index finger is Vatha, under the middle finger is Pitha and under the ring finger is Kapha.

In males:—Normal Pulse—Right arm.

The movement of Vatha will be felt and is compared to the gait of the Peacock, the Swan and the Cock.

Pitha:—Like the movement of Tortoise and the Leech and

Kapha: Like the gliding Snake or the leaping of the Frog.

In Females: Normal Pulse—Left arm.

Vatha—Cobra.
•Pitha—Frog.
Kapha—Slow gait of the Swan.

The differences in the normal pulse between the sexes are note-worthy and give a clue to their physiological differences.

The ratio of Vatha, Pitha and Kapha are as $1 : \frac{1}{2} : \frac{1}{4}$ in normal pulse, called "Mathrai" in Tamil.

Note: The breath force of Vatha (Idagalai) in the right nostril is calculated to be

16 fingers' length, that of Pitha (Pingalai) in the left nostril is 12 fingers length and Kapha is regulating these two, from behind.

The ratio mentioned above is in proportion to the strength and the consequent facility for identification. Vatha having the largest ratio of strength and Rhythm is noticable first under the Index finger; Pitha relatively less than Vatha but more than Kapa is discernible under the middle finger; Kapa being of the least proportionate ratio is to be seen to the feel of the ring finger.

Classes and conditions of persons in whom pulse cannot be properly and accurately ascertained:

1. Persons exhausted by sexual intercourse and also completely weakened by excessive indulgence for a long time.
2. Exhausted by riding Horse or Elephant.
3. After hearty meals.
4. Those under the influence of intoxicants and Narcotics.
5. Those suffering from difficult micturition serious form of Diabetes and Leprosy.
6. Sufferings from chronic Dropsies and emaciated by malignant fevers affecting the bones.

7. Under fear.
8. Under influence of Poisons.
9. After a run.
10. Under severe Sorrow.
11. For women during menses.
12. For women suffering from menorrhagia and metrorrhagia.
13. After oil bath.
14. Under the influence of anger.
15. Insane.
16. When the hands are fractured.
17. Exhaustion.
18. When touching the dead bodies.
19. Fasting.
20. Wet in the rains.
21. Exhausted after singing & dancing or continuous Study.
22. While controlling their breath.

Times in the day which are marked by the predominant influence of the pulse. in normal cases:—

Early morning—Kapa.

Midday—Pitha.

Evening—Vatha.

Deviations from these principles indicate derangement.

Special times for the months in which clear reading is possible:—

Months	Time
Chitrai & Vaikasi (Tamil) 15th April to 15th June.	at dawn and sunrise.
Ani, Adi, (Tamil) 15th June to 15th August. Appisi, Karthigai (Tamil) 15th Oct, to 15th December.	at noon.
Margashi, Thai and Masi (Tamil) 15th Dec. to 15th March.	at sunset.
Panguni, (Tamil) 15th March to 15th April. Avani, (Tamil) 15th Aug. to 15th Sept. Purrattasi, (Tamil) 15th Sept. to 15th Oct	at night.

These are approximately the hours in which the pulse will be very clearly traced.

The study of the abnormal pulse,i.e. pulse in relation to diseases has not been neglected by the Siddhas. All the diseases are traced by the differences in pulse movements and even mental diseases have received their attention. It is gratifying to note that the study of pulse, as revealed in Ayurveda has received the attention of Doctors like Ashutosh Roy and

the scientific study has been related to the Sphygmographic tracings. The Siddhas have dealt with the tracings of pulse by comparing them to the movements of animals and birds previously noticed. The primary point for consideration is that the practice and theory of pulse have been based on the theory of Tri-dosha. A detailed and critical examination of the pulse is beyond the scope of this handbook.

CHAPTER XI.

Constitutions and their features.

The Tri-dosha theory has been the basis of the classification of the constitutions of human beings. Human beings derive their features and constitutional qualities even from their birth as a part and parcel of their being. Even when the first protoplasm of life is conceived in the womb of the mother, there begins the formation of the constitutional features for the growing figure in the womb. The nourishment drawn from the mother and later the feeding and the environment of the child determines the constitution which ultimately forms

the physical vehicle for the display of the soul in the human being.

It is the opinion of sages that a constitution is likely to be built up with a predominance of any one of the Doshas, or one or two in combination which mark out the special features, susceptibilities to diseases, and the possibilities of adjustment in treatment and diagnosis. Thus a child may have Vatha as the most dominant quality in his or her constitution; and another may have Pitha; another Kapha; still another may have Vatha and Pitha more in proportion than Kapha, and thus it is possible to make permutations of these. The facts gathered in respect of this principle of classification have been noted hereunder:—

Constitutions.

1. *Vatha constitution*—Predominant dosha in the body is Vatha.

Body:—Will be robust and flabby and hence weakness for even slight exertion. Body will be cold, muscular pains; dark or rosy complexion.

Pulse:—Slow.

Intellect:—Generally dull. Yawning, constipation, Indigestion, tendency to take less food.

Scanty semen and less inclination for sexual intercourse.

Confused speech. Tendency to emphasise the false aspect as true with a view to gain their ends or attain success.

Eyes dark and watery. Motions dark.

2. *Pitha*:—Predominant Dosha is Pitha. BodyStrong, Warm and Muscular—Complexion fair; Pulse--Rapid; Will--strong and determined to perform difficult tasks; appearance of grey hairs in comparatively young age. The outer or inner canthus of the eye balls will be blood shot Pleasant tone of speech; Eloquence. Displaying •Vikaras or tempers (Vide Page 51 Section. g.) Intelligence and perseverance in examining things; Unsteady mind; Regard for elders; Relish for sour taste. Eyes - green and rosy; Motions—Yellow and Red; Urine—Yellow; Tongue—Yellowish red; Teeth--slightly tinged Yellow and not pure white.

3. *Kapha*:—Predominant dosha is Kapha. Well built body, mildly cold, hoarse throat—

Pulse feeble and palpitating--long and flowing hair on the scalp· Chaste· hates false hood and thieving tendencies. Relishes sweet. In illness spitting phlegm and in serious diseases profuse phlegm--Tendency to Sannipada in the event of sexual intercourse on the day of oil bath. At the time of death, the Prana will escape though the eyes and the eyelids will be open. Eyes–Pale with muco purulent discharge; Motions Pale; Urine--frothy and cloudy; Tongue--Pale wet with saliva. Teeth—White as pearl.

4. *Vayu and Pitha with slight predominance of Vayu*:—Dark complexion, Weak health; loyalty to truth; liable to be shaken and leaning on falsehood; Desire for sexual indulgence; abnormal--Prone to anger; Relish for pungent and tannin articles of food.

5. *Vayu and Kapha*:--Flabby constitution. Slow to move. Rosy complexion; tendency to court Yoga Sadhanas and the like. Relish for the pungent and sour food.

6. *Pitha and Vayu*:- Complexion fair, intelligence, pleasant voice, appreciates sweet odours, Short cough, Dry skin, Relish for pungent and sour foodstuffs.

7. *Pitha and Kapha*:–Complexion akin to the colour Champaka flower; Strong sexual appetite; Pleasant voice; tendency to court the company of the learned; a moderate degree of desire to peep into the mysteries of Yoga and occultism; abundant charity and kindness towards the whole creation.

8. *Kapha and Pitha*:—Rosy complexion tinged slightly green; hair red; brilliant speech; clear tone; steadfast loyalty to truth; capable of attracting and kindling sexual desire. Relish for sweet and sour.

9. *Kapha and Vayu*:—Body robust; Dark or rosy complexion; excessive sexual appetite; Yearning after the mystic sciences and eager desire for research; reverence for elders and love for the learned; forward in action; Relish for sour and pungent foods.

The points noted above, though they may lack the scientific precision of the laboratory, are indicating relevant features of human bodies and describing broadly their physiological tendencies the observation of which is so useful in dav to day practice. The diseases which the flesh is heir to are to be traced to the peculiar characteristics of the constitutions,

taking into consideration other additional factors as climate, occupation and mode of life.

CHAPTER XII.

Constitutions and common diseases.

After the description of the various constitutions and their features, it is useful to note, certain practical conceptions, regarding the common ailments, which affect such bodies It is believed that the preponderant Doshas in the body are by the very nature of such preponderance susceptible to different diseases. A Study of these will be useful for the Physician to take such corrective measures as are necessary for checking the diseases in their initial stages. It is true that there are various causes for the origin and spread of diseases, but the idea that certain specific diseases are the result of the constitutional tendencies derived from the features of the Doshas is fundamental. The list given below is not therefore exhaustive and the purpose of this chapter is merely to take notice of the particular modes in which the different constitutions are affected and their results:--

1. *Vayu Constitutions*:—Passing mucus in the motions, flatulency, Tympanitis, Diarrhoea, ascites, Dropsy, Arthritis, orchitis, Hernia, Hydrocele, Urinary diseases, Piles.

2. *Vayu* & *Pitha*:—Vomiting, Indigestion, belching, urinary diseases, Spermatorrhea Myalgia, Laziness, nervous debility, Gastritis, tastelessness.

3. *Vayu and Kapha*:—Numbness of the extremities, Rheumatic pains, cough. fever, Sannipatha, fissures, Heart affections, Asthma. convulsions, oedema in any part of the body.

4. *Pitha*:—Excessive warmth of body. Hectic fever, Diarrhoea, Dysentery, Insanity, Anaemia, Peripheral neuritis, Confusion of thought, Thirst. Vertigo, Biliousness, Fainting, Menorrhagia, Metrorhagia, Haematurea.

5. *Pitha and Vayu*:—Nocturnal emissions, Dyspepsia, Arthritis, Diarrhoea, Indigestion, Gurgling noise in the abdomen; Ascites, Exhaustion, Fainting, Trance, Intermittent fever, oedema, Piles.

6. *Pitha and Kapha*:—Chronic fever, Asthma, Pthisis, Jaundice, Gastritis, ulcers and growths in the Nostrils, Haemotoma, Anaemia, Chlorosis.

Kapha—Pthiris, Asthma, Spasmodic cough, Bronchitis, Pneumonia, Pleurisy, Fever, Hiccough, Heart diseases, skin diseases, Ulcers, pain in the region of the chest, Chlorosis Anaemia.

Kapha and Pitha-Oedema, Malaria, Neuralgia, Gough, Vomiting, Chest pain, Asthma, Hiccough, Chlorosis, Sprue.

Kapha and Vayu- Gastritis, Swellings or oedema, Pyrosis, Colic, Paralysis, Asthma, Bronchitis, Chlorosis, Rheumatism, Paraplegia, Hemaplegia.

When Vayu constitution is affected by heat:- Diarrhea, Neuralgia, menorrhagia, Anorexia, Eczema, Hematurea, Ascitis, Synovitis.

When Vayu constitution is affected by increased Vayu—Convulsions, Numbness of parts, Myalgia, Torticollis, Neuralgia, Cramps, Catalepsy, Apnoea.

When Vayu constitution is affected by cold:- Spasmodic cough, Myalgic and neuralgic

Pains, Pneumonia, Malaria, Ulcers, Vomiting Pyrosis, Exhaustion, Swellings and Oedema, Arthritis, Chlorosis, Hemiplegia. Cyanosis.

When pitha constitution is affected by heat– Pthisis, Chronic fever, Vomiting, Colic, Diarrhoea, Dyspepsia, Piles, Bitter taste, Wet dreams, insanity, Neuritis, Thirst.

When Pitha constitution is affected by Vayu-Gastralgia, Rheumatism, Vomiting, Hiccough Anorexia, Insanity, Indigestion, Sour Belching. Pain on the region of the liver and chest, Vertigo, Nocturnal emissions, Dibitity.

When Pitha constitution is affected by cold:- Loss of appetite, Proctalgia, Cough, Malaria, Jaundice, Swelling or Oedema, Tongue coated.

When Kapha constitution is affected by heat-Thirst, Cough, Asthma, Multiple abscesses and Boles, Yawning, Rhinitis, Amblyopia.

When Kapha constitution is affected by Vayu Dyspepsia, Asthma, Hoarseness of throat, Syncope, Increased Salivation, Slimy feeling of Tongue, Dysentery, Muscular pains, numbness, Convulsions, Anaemia, Fainting, Hiccough.

When Kapha constitution is affected by cold:- Asphyxia, Shock, Syncope, Cyanosis, Fainting, Sweating, Hiccough, Convulsions, Tympanitis.

CHAPTER XIII.

Diseases.

We shall consider in this Chapter the diseases as conceived by the Siddhas and revealed in their songs. It has been accepted on all hands that excessive or irregular diet, unsuitable food- stuffs, conditions of work, abnormal sexual idulgence, and other external causes affect the equilibrium of the working of the Dhatus and seven tissues and disturb the normal functioning of the organs of the physical frame. The three Dhatus are always in perpetual working protecting themselves against the entry of foreign and undesirable influences and struggling hard to keep themselves in equilibrium. This is not possible always, and wher they are overworked or underfed and when they lack the usual alertness in their physiological functioning, the body tends to diseases.

The words of the Siddhas are indeed difficult to interpret and to be translated effectively in a foreign medium. It has been described that the number of diseases comes up to 4448. They have classified them as those affecting the different parts of the body. They have also analysed them as far as possible to be traced to the doshas. A complete examination of their analysis and description may not be quite necessary in a small hand book as this. One very interesting conception relating to the wounds or injuries that can be inflicted on the human body contemplates as many as 700 varieties. The diseases of the tongue and the teeth are reckoned as 76, and those of the eye are of 96 kinds. Boils and abcesses number 60. Leprosy 18; Neuralgias 6: Tubercular diseases 7;Grahani (Diarrhoea and dysenteries) 25; Intestinal worms 6; skin diseases 90; and Janni or Sannipada 76 of which 13 are very important. Diseases like Piles number 9; Sterility of 6 kinds; Hiccough, Ear diseases, have received due attention. In fact they have brought within their range of vision almost all kinds of diseases, including eruptic fevers and cholera.

They have enunciated the principles of discovering these diseases and described

the main sources and channels of the origin and spread of these maladies in regard to the nervous system as affected by and working with the different kinds of Vayu. The rational basis upon which they have proceeded to analyse the physiological processes is indeed admirable, and they have not forgotten their Synthetic conception which recognises the working of the Idakalai, the Pingalai and the Sushumna, as creative factors of Vatha, Pitha and Kapha. It is needless to repeat that the study of the diseases, their causes and their workings (which is beyond the scope of this hand book) as conceived by the Siddhas deserves further research, closer examination and will form a treatise by itself.

The chief diseases are enumerated below:-

Vatha doshas	produce	84	kinds of diseases.
Pitha	,,	48	,,
Kapha	,,	96	,,
Vayus are of		300	kinds.
Fevers		85	,,
Eye diseases		96	,,
Skin diseases		90	,,
Janni or Sannipatha		13	,,

Diseases of the Tongue and Teeth	96	kinds
Poisonous bites and stings of animals etc.	96	,,
Grahanis	25	,,
Atisara	25	,,
Tumours and Systs	12	,,
Intestinal worms	6	,,
Ear diseases	10	,,
Nose diseases	10	,,
Wounds and injuries	700	,,
Toxemias due to bites	500	,,
Boils and Abceesses	60	,,
Children's diseases	100	,,
Hiccough	10	,,
Vomiting	5	,,
Mega Roga	20	,,
Tubercular diseases	7	,,
Piles	9	,,
Neuralgias	6	,,
Fainting and collapse	7	,,
Leprosy	15	,,
Diseases of the uterus that causes sterility	6	,,

THE JANNIES.

1. *Anthakan.*

Very high temperature. Body will be stiff. Increased salivation, hiccough, vomiting, cough, thirst, confusion of thought, anxiousness, swelling, shivering, restlessness, restlessness of the head, burning sensation in the stomach, delirium, and death may occur in 10 days.

2. *Seethangam,*

Pain all over the body, chill feeling, shivering, perspiration, diarrhoea with a gurgling noise in the abdomen followed by tympanitis, thirst, anxious look, hiccough, vomiting, exhaustion, fainting, collapse, weakness, hoarse throat, cough, spasm, choking of phlegm rise and fall in the bed, and death will follow in 15 days.

3. *Kandakuchan.*

High fever, neuralgic pains all over the body, shivering, itching sensation, headache, sleeping, dryness, ulcer, and furred tongue and throat, bleeding from gums, diarrhoea with tympanitis, delirium, anxious look and speech, vomiting, hiccough, phlegm, spasm, hazy vision, deafness, rising, weeping and falling in bed, death in 16 days.

4. *Chitha Vibraman.*

Pain, high fever, Vatha and Pitha will be increased, delerium, senselessness, weeping, laughing, dancing, singing, happy expressions of the eyes, rising, falling, weeping and rolling in bed, crying, exhaustion, vacant look, extreme kindness towards visitors, and feeling happy, deep breathing sighing, can be cured if the patient survives 21 days.

5. *Thandrikan.*

Severe pain in the joints, perspiration, thirst, headache, salivation, cough, vomiting, fainting, restlessness, rolling, sleeplessness, confused thought, weakness, can be cured in 7 days.

6. *Pralabhan.*

Pain, fever, chill, shivering, thirst, hiccough, muttering delerium, plhegm in the chest, cough, spasm, biliousness, rising in confusion, tottering, sexual desire, abnormal cries as one in misery, cure after 14 days, if surviving.

7. *Karuniasan.*

Pain all over, fever, head ache, thirst, loss of memory, biliousness, fainting, vomiting, hiccough, cough, sleeplessness, sudden rising

from bed, Period of suffering is about 60 days, likely to be cured if surviving.

8. *Silethma---Janni.*

Phlegm in the chest with moist rales, perspiration, thinking unusual things, requiring constant company, hates everything, persistance at everything, exhaustion, fainting, slimy tongue, urine and faeces pale.

9. *Sathi--Janni.*

Fever, head-ache, fainting, frequent rising from bed, blood shot eyes, confusion of thought.

10. *Mantha---Janni.*

Fever, extremities cold, tongue quoted dark, constipation, frequent urination, fainting, pain in the face and head.

11. *Mugavatha--Janni.*--(Facial Paralysis)

Neuralgic pains in the eyes, brows and temple, will lead to the turning of the face and mouth to an angle.

12. *Vedi—Janni.* (Otitismedia)

Severe pain into the Ear with heaviness, leads to the turning of the face to one side and the tongue will be troubled.

13. *Suga—Janni.*

Pain all over, fever, blood shot eyes, perspiration, shivering. collecting the clothes and raising up from bed, confusion of thought.

This is said to be produced by the sexual intercourse, while exhausted from taking oil bath, or after taking a hearty meal with curds and indigestion or sexual indulgence, and the prognosis is said to be serious.

14. *Kapala—Janni.*

Severe pain in the nape of the neck, preventing the movement of the neck to the sides, neuralgic pains in the head and ears, itching sensation, loss of consciousness, stiffness, contraction of the face, nose and eyes, perspiration, feverishness, exhaustion, shivering, burning sensation in the hands, emaciation.

Valippus (Fits)

Puraveechu (Tetanus)

Frequent and interrupted neuralgic pains, powerful contractions, perspiration, the tongue will not be steady, choking sensation in the chest, the entire body will be bent back. Jaws will be locked.

Ukkuthu or Ulveechu-another form of Tetanus.

Fever, perspiration, locked jaws, contraction of the body, feeling deep seated pain, dry tongue, thirst, wind passing through anus with loud noise, anorexia.

Kakkai valippu (kakkai-crow, Valipu-fits) Epilipsy.

Pitha circulates in excessive proportions, produces confusion of thought, senselessness, fainting, and drags on the tongue, lips, nose, eyes and brows together and produce fits, shakal the limbs and throws down. White frothy saliva will flow and upward movement in breathing.

Kuthirai Valipu.

Eyes and brows congested, arms and legs will be turned to one side, neuralgic pains white frothy saliva will flow, vacant look upon the sky, the limbs will be felt hot, the body will shiver and throb, phlegm in the throat.

Kumarakanda Esippu.

Eyes and mouth turned angular, neuralgic pains in the arms and legs from one side to another alternately, fever, severe head ache, restlessness, trance

Muyalkanda Isippu.

Bites the floor by falling on the side of face, frothy saliva flowing, role the eyeballs, vacant look, cramps, neuralgic pains on the shoulder and chest and contract them, fainting and feeling sorrowful.

N.B.—The above are also grouped as jannies, because of their troublesome nature, with complications and usually lead to death or render the patients chronic decripts.

Complications.

The following complications may set in, if the treatment is not proper and adequate or the diet regulations are violated:—

1. *Apathia Dosha.*

The foodstuffs that are cold and that will not be digested will produce, Trance, unconsciousness, excessive thirst, delerium and pain in the chest.

2. *Sangama Dosha.*

The sexual intercourse will produce pain all over the body, burning sensation in the chest, frequent rising from bed, rolling in bed, low muttering delerium, extremities feeling cold, vacant look.

3. *Vishama Dosha*—(Toxic effects)

Very high fever, low muttering delirium, excessive thirst, burning sensation in the stomach. trance. and rapid vatha pulse, sweating, burning sensation all over the body.

4. *Vishama Seetha Dosha.*

Vertigo, high fever, Rigor sets in 2 or 3 times in a day with shivering, excessive thirst, head-ache, furred tongue, low muttering delirium, vacant look and rolling in bed.

5. *Peetha Jimmaha Dosha.*

Tongue coated yellow, fissured and dry; high fever, trance, vertigo, perspire, angry look shivering.

6. *Raktha Jimmaha Dosha.*

Tongue red, elongated and sharp; high fever, thirst and burning sensation.

7. *Krishna Jimmaha Dosha*—(the most serious kind of Doshas)

Tongue dark and furred, frequent rising from bed, unconsciousness, itching sensation all over the body, sweating, spasm, burning sensation of the body, very high fever, throbbing, weakness and the body will become dark.

The above Doshas set in, due to the affection of cold and always follow the Janni and in most of these diseases, blood shot eyes or green eyes, dark colour of the body, furred tongue, yellow, red or dark coloured tongue are the chief symptoms.

II— Mega Diseases.

There is another set of diseases, called Mega Rogas, and the descriptions are noteworthy. These are of 20 Kinds, of which 4 are due to Vatha Dosha, 6 to Pitha and 10 to Kapha and they are to be found out from the examination of urine.

Vatha Mega Rogas.

1. Achiakandhi Mega-(Sub-acute Nephritis)

The urine will be like that of ghee and with a wick it will burn. The patient will look tired, he will be much debilitated and swoon.

2. Sudha Mega—(Acute Nephritis)

The urine will be like that of the cow's and burn brightly with a wick. The patient will have a changed complexion and figure, spasm and exhaustion will be found. The

patient will die if it is not alright within 2 weeks.

3. Vatha Pramia Mega—(the nearest parallel being—Chronic Bright's disease)

The urine will look fatty, heavy, and smelling mutton. If boiled, it will condense like honey, if it is not cured within 6 months, the patient will die.

4. Mangisasiravi Mega—(Haemohoporphyrinurea)

The urine will look like the fat of a goat, when boiled it will appear like the goat's ghee, and smell like the juice of sugarcane. Duration 5 months.

The constitutional symptoms for the above are, burning sensation in the arms, legs, eyes and body. Teeth, tongue, and throat will become dark; dry tongue, trance, restlessness, incoherent talk, excessive appetite and thirst. foul smelling, wind passing, and the changes in the pulse will be notable.

Pitha Mega Rogas.

1. Apia Mega—(Gravel in urine)

Excessive urine secreted with force like that of an elephant. Kaolin coloured salt will be deposited on boiling. Duration 8 months.

2. *Pitha Pramiya Mega* (Mucous urine)

Urine will be like Aloe juice and smell. It will emanate very nauseating smell on boiling. Duration 3 years.

3. *Savirana Mega* (Bacteria in urine)

The urine will be ammoniacal with nauseating smell, fleas and ants will remain on the floor where the urine is passed. Duration 2 years.

4. *Mathu Mega*– (Diabetes Mellitus)

Yellow coloured urine passed with burning sensation and pain in testicles and urethra frequently. White sediment will form when boiled. The body and eyes will become pale. Duration 5 years.

5. *Sandhira* (Albumenurea)

The urine will be clear as crystal. The Scrotum and Urethra will be painful as if in Urethritis and flow like juice of stalks of Thashai and in large quantities. It will smell pus when boiled. Duration 5 years.

6. *Arka Mega.* (Haemaglobinurea)

Blood coloured urine, bad smell and saltish, Urethritis smell mutton when boiled. Duration 9 months.

The common symptoms exhibited in the constitution are as follows:—

Anaemia, burning sensation all over the body, and urine will smell like fish, stomatitis and Pyorrhea, hiccough, anorexia, nausea, fever, restlessness, fainting, trance, dry tongue, thirst, vomiting and exhaustion.

Kapha Mega Rogas.

1. *Vasa Mega* (Fat in the unine)

Urine appears like the mixture of fat and smell mucous, frequent micturition. A layer will be formed on the floor where the urine is passed. The same smell will be found when boiled. Duration 7 years.

2. *Oothama Mega.* (Polyurea)

Urine appears like clear water and on boiling it will be the same. Duration 10 months.

3. *Machai Mega.* (Marrow in the urine)

Urine will appear like bone marrow in colour, as if the same is mixed up in it. It is said to be formed of the melted marrow of the bones. Duration 5 years.

4. *Adhika Mega.* (Glycosurea)

The urine will be like that of the water from tender cocoanut in colour and smell, even when boiled. Excessive thirst, debility, anxiety, and the emaciation of the body. Duration 7 years.

5. *Sura Mega.* (Chylurea)

Urine like palmyra toddy and frothy. First it will flow clear and gradually flow thicker. When boiled it will smell toddy. Duration 7 years.

6. *Sukila Mega.* (A kind of Spermatorrhoea)

Urine will appear like sperm and white. It will show a tendency to be curdled when boiled. Duration 3 years.

7. *Uthaka Mega.*

Urine will resemble the water that remain after washing rice in it, and flow in large quantity, white sediment like calcium will deposit when boiled. A bad smell will emanate from the body. Duration 1 year.

8. *Prasa Mega* (Haematurea)

Urine like honey. Sediment waxy when boiled. The fleas and ants will be

attracted in the ground where the urine was passed. Duration 5 months.

9. *Lavana Mega.* (Phosphate-urea)

Urine coloured chunam (Lime-calcium), the sediments will be found like Kaolin earth and chunam when boiled. Duration 15 years.

10. *Thythia Mega.* (Pus in urine)

Urine like that of the mutton washed water with bad smell and flows in a twisted manner from the urethra. When boiled the same mutton smell will emanate. Duration 3 years.

General condition of the body.

The body will tend to obesity, pale, there will be itching sensation, excessive appetite and thirst, cough, phlegm, exhaustion and Rheumatic pains.

The 10 kinds of troubles in Mega Rogas are:-

1. Uneasiness in the lowest part of the abdomen.
2. Exhaustion after passing urine.
3. The wind will be troublesome.
4. The Tri-Doshas will be increased.
5. Loss of semen.

6. Excessive thirst and consequent sediments in urine.
7. Nausea and uneasy feeling.
8. Carbuncles may arise.
9. Diarrhoea.
10. Memory will fail before death.

These diseases may be caused by hereditary tendency or indulgence in sexual intercourse or of venereal origin.

Leprosy.

Another interesting subject is Leprosy. This is divided into 18 varieties and they are defined as under:--

1. *Pundareeka Kushta.*

Eruptions with itching sensation will be found in the body, face and ears. They may be dark, pale or red and appear as the lumps of petals of the lotus flower and ulcerate, There will be burning sensation, and pain. There will be oozing of thick serum in the ulcer and the blood will not stick on the ulcer, as if a smooth and slimy surface is on the ulcer.

2. *Vispotaka Kushta.*

The whole body will become red and pale with itching sensation all over, followed

by eruptions and ulcers like that of the hood of a cobra. There will also be unbearable burning sensation.

3. *Bama Kushta.*

Red and white patches like the petals of the lotus flower followed by boils or blebs and itching sensation in the body. Epidermis will peel off like that of a cobra; there will be swelling and the fingers and toes will become shortened.

4. *Ekasarma Kushta.*

The whole body will become dark, epidermis will peel off and turn red. Then, there will be itching sensation, seborrhea like eruptions, dry skin, heaviness of the toes, pain in the body anaesthetic patches, fissures, swelling and debility.

5. *Karna Kushta.*

The skin will become greenish and fissured with small itches spotted. Tri-doshas will be increased, body will tend to obesity and of the colour of the flower Clitorea Ternatia (Black variety,) and also swelling.

6. *Sigutha Kushta.*

Yellow patches will appear on the skin, then turn pale and become dark finally.

Fissure and pus will be formed. The lower part of the abdomen, i. e., below the navel, the muscles will become hardened and pus will ooze out. There will be anaesthesia and burning sensation on the skin.

7. *Krishna Kushta.*

The whole body including the arms and legs from top to toe will become dark, anaesthetic patches with nauseating smell and pain. Increased heat in the body, ulcers will be formed in the head, and a few in the soles of the foot and femoral region and anxious look.

8. *Avathumbra Kushta.*

Boils in groups, like that of the bunch of grapes, will be formed and appear dried and the whole body will become dark. There will also be itches, anaesthesia, serous exudation and fainting.

9. *Mandula Kushta.*

Red and greenish patches on the scalp and all over the body. And also white patches on the scalp, ulcers all over the body, raised and dark patches, itching and oozing of serum.

10. *Aparisa Kushta.*

and untouchable sensation, increased Vatha Dosha, swelling and troublesome nature.

11. *Visarchika Kushta.*

Due to Vatha--Pitha. Glossy pale skin, burning sensation, red patches, thick and red skin, furred, pain in the abdomen and produce anger.

12. *Vipathika Kushta.*

Due to Kapha-Pitha. Fissuied skin on the body, unbearable and uneasy, feverish, fissures on the hands and legs. Eyelids, ears and neck, swelling, glossy skin like that of a cobra, black patches in the joints.

13. *Kidipa Kushta.*

Whole body greenish, the skin becomes thick like that of an elephant, frequent micturition, oozing of water on the body, nauseating smell, increased Vatha Dosha.

14. *Sarma Kushta.*

Pain all over the body followed by uneasiness and fissures as if they are out into two parts. The skin will have greenish, whitish and black colours. Raised patches with itching sensation and discharge of pus. The touch of the part will be unbearable,

swooning, debility and pain in the body will be produced.

15. *Thatharu Kushta.*

Red patches, pale, profuse curly growth of hairs, increased Pitha-Kapha, bloated body and anaesthetic regions in the body.

16. *Sithma Kushta.*

Due to Vatha-Pitha. Begins like the flower of bottle gourd, with raised anaesthetic patches all over the body. Yellowish and oozing of blood, unbearable itching and forgetfulness.

17. *Satharu Kushta.*

Due to Vatha-Kapha. Raised patches on the body with red, white and greenish colours and form ulcers. Itching and burning sensations, Raised margins of the ulcers. The skin will be hanging like the serpant's. Patches on the nose, eyes, cheek, and ears will be found.

18 *Swetha Kushta.*

There will be white patches on the skin. The hairs on them will also turn white. If these patches appear reddish dark, it is said to be due to Vatha, if reddish white like

the red Lotus flower, it is due to Pitha, if whitish it is due to Kapha.

Out of the above 18 varieties, 6 of them are said to be caused by Mega rogas and Kirandhi rogas. (Kirandi rogas are those that are allied to Scabies, Pempigus, itches etc. in Western system) This is not considered, in this systen, as a superficial skin disease, but deep seated and a constitutional affection. Eight of them are said to be caused by the fleas, and 4 by parasites.

CHAPTER XIV.

Fevers.

Fever is supposed to be one of the most terrible maladies which attack human beings. This certainly shows that serious types of fevers have been examined and dealt with by the Siddhas. Fevers are mainly of seven kinds and the classification is based on the conception of the derangements of the doshas in several ways.

General symptoms.

The temperature may rise up with rigor. Shivering, pain, restlessness, anorexia,

vomiting, uneasy feelings, headache, nausea, constipation or diarrhoea, delirium, confusion of thought, unconsciousness, hiccough, thirst, raving, sleeplessness or profound slumber, cough, spitting of phlegm, feeling heat or cold (according to the predomenance of Pitha or Kapha). Sometimes cramps or fits may ensue.

1. Vatha Juram. (Juram—Fever)

Pain all over the body, neuralgic pain in the joints, pain in the waist and chest, head ache, shivering and rigor concomitant symptoms, constipation, loss of appetite, tamarin taste in the tongue, spasm, loss of heat in the extremities. Face, mouth, eyes, urine and motions will become darkened in colour. Sleeplessness, thirst, exhaustion and yawning.

2. Pitha Juram.

High temperature, babbling, burning sensation in the chest, biliousness, vomiting, exhaustion, heaviness, perspiration, thirst, irritation in the throat, tongue parched, bitter. Face, eyes, urine and motions yellowish. Irregular appetite. Fever subsides with the decrease of bile in the stomach. In chronic cases blood is impoverished, body becomes pale, swelling

and frequent shivering follow. Severe constipation results and death ensues.

3. Sleshma Juram. (Kapha Fever)

Excessive heat and consequent intense nervous and bodily excitement produced, carries excessive secretions to the head, headache, pain and fever. Catarrhal discharge from the nose. Violent cough, phlegm discharges. Pain in the chest, giddiness, burning sensation in the eyes and nose. Intermittant fever, perspiration in the face and the head. Urine affected (it is compared to the urine of the ass). Motions hardened, tongue rough and pale, taste sweet and saltish. Excessive salivation. Body, eyes, phlegm get pale, and mucous in the motions.

4 Vatha Sleshma Fever.

Rise of temperature, shivering, blabbering, grinding the teeth, deafness, dimness of vision, tongue becoming rough, cough, haemoplysis, hoarseness of the throat, constipation, anorexia, extreme exhaustion, spasm.

5. Vatha Pitha Fever.

Shivering all over the body, tongue coated dark, weak and plaintive tone, exhaustion leading to sleep, motions pale and yellow,

bitter taste, emaciation, hesitation aud giddiness.

6. Pitha Slethma Fever.

Profuse sweating, blabbering, exhaustion and sleep, cough, pain in the chest, thirst, headache, pain in the nape of the neck, slimy tongue, loss of taste and smell.

7. Akanthuge Juram. (There are 8 kinds.)

(a) Bhoota Juram-Neuraglic pains, rolling eyes, tendency to question too much, too much craving for food, desire for the favourite things, singing and dancing, and sleep.

(b) Ajeerna Juram--High temperature, spasm, hiccough, loss of appetite, chest and thigh painful, acidity and belching, vomiting, thirst, heaving, colic, flatulence and shivering.

(c) Abikatha Juram- Causes: Too much walking, horse and elephant ride, carrying heavy loads, exhausting toil, exposure to and wandering in the chill, wounds and injuries. These affect the Dathus, chiefly the marrow and the blood.

Symptoms-- Sweating, trance, melancholia, blabbering, change of complexion, pain all over the body, fever.

(d) *Akike Juram*— Excessive shivering, emaciation, cough, burning sensation of the body, pain in the head and eyes, pain all over the body, sleep, giddiness pale complexion, icterus eyes, flatulency, vomiting, burning sensation of the eyes and palms, thirst, fever, blabbering.

(e) *Maral Juram*— (Corresponds to the Malarial, intermittant fever.)

(f) *Akeeka Seetha Juram*— High fever, severe pain, specially in the head, chin and eyebrows, slimy tongue and lips, sleeplessness, benumbing, shivering, thirst and giddiness.

(g) *Amatheesara Juram*— Slight pain in the anus, sometimes blood and mucous in the motions, rise of temperature, thrist, bloating and paleness of the body, lassitude, bitterness and cough.

(h) *Dhathukatha Juram*— This is a complicated type, resulting from the residual effects of Nos. (e) (f) and (g), in case these are not properly treated

This is a persistant type, negligent treatment of the above, first affects the lymph dhatu, after 7 days the blood, after 21 days the Medha Dhatu(fat), after 5 months the bones

after 2 years the marrow, after 3 years the semen. This is too malignant type of chronic Malaria.

Malignant types of fevers produce the following characteristic features which portend danger:—

(1) Partial paralysis of memory, (2) Imaginary conversation with the departed, (3) Confusion of thought bordering on insanity (4) Shortened breathings (5) Staring eyes without winking, (6) Change of voice, (7) Abnormal burning sensation all over the body, (8) Unconscious movement of the hand over the face constantly, (9) Cold and clammy perspiration all over the body, (10) Last breaths.

Some are of opinion that treatment is possible in the first 3 stages and afterwards it is hopeless. Others consider that treatment should be made even upto the 9 th stage. At all event the physician should not lose heart but continue to give effective treatment to check the onslaught of these symptoms and his responsibilities are onerous.

Symptoms of abatement of fever.

Disappearance of the evil symptoms, such as, indiscriminate cravings for all kinds

of food burning sensation, exhaustion, foul odour, pain in body and unsteady mind.

Appearance of the following good symptoms indicates relief and complete cure:–

Lightness of the body, the normal workings of the five senses, perspiration, sneezing, keen appetite for food, a pleasant itching sensation of the scalp.

Classification of Fevers.

The Fevers may be classified as follows:—

(a) Acute fevers—the function will be deranged.

(b) Chronic fevers—the seven kinds of Dhatus will be affected.

(a) **Acute Fevers**—May be classified on the basis of the derangement of the doshas, as follows:—

1. Those which are due to the derangement of one function:—

(i) Vayu fever; (ii) Pitha fever: (iii) Kapha fever.

2. Those due to the derangement of two functions:—

(i) Vayu and Pitha; (ii) Vayu and Kapha; (iii) Kapha and Pitha.

3. Those due to the derangement of three functions:—

(i) Sannipatha; (ii) Surgical and accidental.

(b) **Chronic Fevers**— They are of two kinds—

(i) that which consumes a few of the Dathus.

(ii) that which consumes all the tissues.

Fevers and rise of temperature of body are not always synonymous, since in certain kinds of Sannipatha, temperature is seldom perceptible and in certain cases of the presence of temperature, the symptoms are absent. So, the idea of the Siddhas also is similar to the clinical classification noted hereunder:—

1. Symptoms of fever with rise of temperature.
2. „ without „
3. „ with subnormal temperature.
4. Absence of symptoms of fever but rise in temperature.

CHAPTER XV.

Eruptive Fevers.

These are acute infectious diseases characterised by cutaneous eruptions.

Some of them pass through the stages of papule, vesicle, pustule and crust and some pass from the stage of papule to crust directly.

According to the Dravidian conception, these are said to be caused by excessive heat. In India, the various kinds of eruptive fevers are generally found during the hot season in the months of April, May and June and subside in other months.

It is also stated by them that the disease may be infected if another healthy person is frightened at the sight of the one that suffers from it.

According to the modern West, the Etiology of this disease is doubtful or unknown, even though these eruptive diseases do exist in the world even many centuries before B. C.

The dravidians classify them into 14 kinds of eruptions with fever.

Vaccination is only a preventive against Small pox. Recent researches show that, whenever there is an epidemic, revaccination should be tried to make sure whether one is immune or not to the disease. Thus, the vaccination theory is still doubtful. At any rate, we are not yet provided with a vaccination for all the 14 kinds, described below. It cannot be said that Small pox alone is fatal and the others like Chicken pox and Measles are not so dangerous at all. Many infants die in India, every year, out of the latter two types, or suffer a good deal from their complications.

In the absence of a bacterio-therapy, for all the 14 varieties, we have to conclude, that the excessive heat of the body, may be the chief factor to produce fever and eruptions, and invariably the children are very susceptible to these diseases.

Description of the 14 kinds.

1. *Panaimugari*— There will be mild temperature. The body will shiver. Eyes will be tinged red. There will be swelling of the neck and nose. In women, there will be metrorrhagia. There will be delirium and Sannipatha.

2. *Paulammai*— There will be high temperature on the third day of the fever, eruptions will be found on the face and head, body will be painful, on the 7-th day the eruptions will become a vesicle and pustule, and on the 9-th day, they will turn into crusts. Bath to be taken on the 11th or 15th day.

3. *Varaguthiri*— High fever, eruptions found on the head on the 3rd day. There will be haemorrhage through the mouth and urethra. On the 7th day the eruptions will turn into pustules and on the 11th into crusts.

4. *Kollammai*— High fever, delirium, sannipatha symptoms, and convulsions will be found. Eruptions will be found on the 3rd day on the head. Virulency 13 days.

5. *Kalluthiri*-- Very high fever, diarrhoea, vomiting, eruptions on head on the 3rd day. On the 7th the eruptions will turn like the fruits of Clerodeudron Neriifolium. On the 10th day it will subside or begin to dry up into crusts. Bath on the 11th day.

6. *Kadugammai*-- Mild fever, eruption on the head on 3rd day. The whole body will become swollen. There will also be found hoarse throat and voice, and also diarrhoea.

7. *Moshukkun*- Low fever, pain all over the body, back stiff, body swollen, burning sensation. Eruptions appear on the 7th day.

8. *Uppudhiri* -Fever, eruptions on the head on the 3rd day, the whole body will appear as if coated with the powered salt. Become pustules on the 5th day and subsides on the 7th. Bath on the 11th day.

9. *Karumbanachi*—High fever, eruptions on the 4th day. Body painful, becomes dark, further eruptions may not be found outside, but will be formed inside the body. Diarrhoea and fainting may be found. If the bowels are constipated the symptoms will subside on the 13th day. Otherwise ulcers and fissures will be formed all over the body and maggots or some tiny worms will be found in the ulcers, when the breathing will be contorted. If 21 days are passed the patient may recover, but generally the majority succumb to this disease.

10. *Vendayammai*—Mild fever, eruptions on 3rd day, become pustules on the 7th, and subside on the 9th day. Bath on the 15th day.

11. *Paasipayarammai*-Fever with delirium eruptions on the 3rd day, become pustules on

the 7th, subsides on the 9th day. Bath on the 17th day.

12. *Vichirippu* Fever, eyes red, vomiting and purging, eruptions on 3rd day, and speard up all over the body like paddy husks and disappear. There will be slight pain in the abdomen, Bath on the 7th day.

13. *Neerkuluvan*—Fever, pustules on 3rd day, appear like the fruits of Clerodeudron Neriifolium. Subside on the 7th day. Bath on the 9th day.

14. *Thavalai* Fever with pain in the joints and prevents movements. Anorexia. Eruptions on the 3rd day and subside on the 9th. Bath on the 11th day.

The above varieties of Eruptive fevers are given the Tamil names of some of the natural products, as the eruptions are similar in appearance to them. For instance:—

1. Panaimugari—appear like the external bark of the Palmyra Palm tree. (Panai—Palmyra)
2. Paulammai pustules appear like a pustule containing milk. (Paul—milk)

3. Varaguthiri—like the food corn called Varagu.
4. Kollammai—like Horse gram.
5. Kalluthiri—like stone—hard.
6. Kadugammai - like mustard seeds.
7. Moshukkan—like Bees wax.
8. Upputhiri like salt crests.
9. Karumbanachi—that turns the complexion dark.
10. Vendayammai—like the seeds of Trigonella Foenum
11. Pasipayarammai Like the seeds of greem beans.
12. Vichirippu like paddy husk.
13. Neerkuluvan as if the water is formed into a beb.
14. Thavalai like the skin of a frog.

There are various kinds of treatments for the various symptoms and their complications in the Siddha system. They are dealt with below:—

Treatment.

Preventing the Virulency.

(a) Triturate Shorea Robusta with the juice of Indigofera Augustifelia for 12 hours, and divide into a pill of 10 grains each. Give

one pill in hot water, once a day, for 3 days, whether eruptions are found or not.

(b) Burn the soles of old shoes into ashes and give this ash in 10 grain doses, once a day for 3 days in hot water.

If the eruptions do not come out properly, but produce internal symptoms, threatening complications—

Boil in water a tender Cocoanut, after scraping of the external skin only, leaving the fibres in tact over the shell. Take this Cocoanut water and dissolve in it 60 grains of Cumin seeds, powered finely or 1½ Tolas each of Strychnos potatorum and Cyperus Pertenius, and triturate well with the Cocoanut water, and given for 3 days, as a single dose every day, will set right.

Treatment for complications.

1. *Diarrhoea.*

(a) Take 4 ounces of the leaves of Fabina Imbricata and place them in a new (unused) mud pot, pour over it ½ a pint of food fermented water (which is detailed elsewhere) and shake well for some hours and give 4 to 8 ounces of this, 3 times a day, after throwing out the leaves.

(b) Take dried Ginger, the central sticks that are attached to the leaves of Margosa (Tamil—Veppan Eerku), the roots of the Lemon tree, and Cyperus Pertenius in equal parts, gently fry them after bruising, and prepare a decoction of these, according to formula, and give in 2 to 4 ounce doses, 3 times a day.

2. *Dysentry.*

(a) 2 ounces of the bark of Jambul tree bruised with 4 ounces of Cow's milk(unboiled) and taken as a single draught, twice a day, for 3 days.

(b) The entire plant of Cassia Auriculata (bruised and fried) made into decoction according to formula, and given in 2 ounce doses, twice a day.

(c) The inner pulp of Mango seed, fried gently, and triturate with curd (fermented and solidified milk). Pulp 1 to 2 tolas, and curd 2 to 4 ounces, twice a day.

(d) Take two fully ripened Bael fruits, bruise and fry gently and boil with 1½ pints of water, reduce to ⅛ part, strain and add 10 grains each of powdered Cloves and

Aconitum Heterphyllum, and taken 3 times a day in 2 to 4 ounce doses.

(e) Basma of Hart's horn prepared as follows:—

Cut the Hart's horn in small pieces from 3 to 6 inches long and $\frac{1}{4}$ to $\frac{1}{2}$ inch thick, after scraping of the marrow. Keep them immersed in the juice of Coccinia Indica leaves for 3 days, and apply a paste made of the same leaves (fresh) to the broken pieces of horn separately and burn with Cow dung cakes. Q. S. (for 9 tolas of horn, say 2 lbs of cakes). Give this Basma in 5 to 15 grain doses with cooled water, thrice a day.

3. *Throat affections.*

Bezoa (Gorochan)	.... 5 grains
Juice of Anisochilus Carnosus	.... 2 ounces

Sig, 1 dose. B.D.

For gargling in throat affections—Prepare a decoction out of the flowers of Pomegranate, add to it some honey and lime juice and gargle every 4 hours until relieved.

4. *Continuance of fever after eruptions.*

Prepare a decoction out of the following:

The root bark of Lemon tree	equal parts.
Cardamom seeds	
Khus khus root	
Tinosporo cordifolia	
Mullago cerviana	

Give in 2 to 4 ounce doses B. D.

5. *Flatus due to constipation.*

Give the following as a single draught:—

Onions—bruised	1½ Tolas.
Sugar candy—powdered	1½ ,,
Triturate with Castor oil	1 to 2 ounces.

6. *Thirst.*

Clean the Hart's horn with water, and take fine filings of this horn about 2 to 4 ounces and place them in 4 pints of hot water. Give this water for drinking frequently as required.

7. *Inflammations in the conjunctions*

Bruised seeds of Cumin, bundle with a clean linen, dip in mother's milk, and foment the eyes frequently.

To prevent eruptions into the eye balls:

While the symptoms of the fever begin and when it is suspected that Small pox or other eruptions may follow, a healthy person

may be requested to chew some onions and blow the air into the eyes of the patient.

8. *Bleeding through the Mouth and Urethra.*

Cleaned Earth worms, called Bhunagam, (by immersing them in water wash off the mud)	5 Nos.
Root bark of Sarasaparilla	½ Tola
Filings of Hart's horn	½ „

Triturate them together in the water in which the filings of Hart's horn are kept immersed already, for the purpose of drinking, 2 to 4 ounces and give it as one dose, twice a day, for 3 days.

9. *Arthritis.*

Foment and apply to the parts affected some cold straw (paddy hay)used for the roofs, and Margosa leaves, submitting them to the process of steam, for 6 days, *or*

Apply similar fomentations and application of poultice made by boiling the entire plant, Althae Radix.

10. *Ulcerating eruptions and Inflammations.*

Scrape the pulp of the fully ripened Cocoanut and mix with it equal quantity of the

dark brown skin layer of the Tamarind seeds, and squeeze them together and collect the oil, and apply this.

It is believed in India, that there might be conjestion and ulceration internally and on the organs,, even after the external symptoms subside. Therefore, it is insisted not tc use any pungent or hot foods or drinks or baths for some months, after the disappearance of external symptoms.

Convalescence.

During convalescence the following methods are to be adopted: —

1. The tender flowering pods or berries of Gossypium (cotton)plant
   The tender berries of Ficus Glomerata.
   Nutmegs
   Cumin seeds.
   } each 1 Tola

To be triturated with butter milk (churned curd) about 4 ounces and taken for 1 or 2 days, once a day.

2. After the above, the following paste made of,

Cynodon Dactylon,

Margosa leaves.
Turmeric.

to be applied from the top of the head to the toes, and given cold bath every alternate day, 3 diems

3. After the above bath, Margosa leaves and Turmeric made into a paste and applied as before, and curd should be rubbed over the paste and bathed as before in cold water on alternate days, 3 diems.

4. After this, the leaves of Cassia Auriculata to be triturated with butter milk (churned curd) and applied to head and trunk, and bath every alternate day--3 diems.

5. After this Castor oil to be rubbed to scalp and the whole body and given bath twice a week, for which the powdered leaves of Usilam(Tamil-Oonjal tree) as soap for removing the oil.

Those who are afraid of taking bath in cold water, may keep the water under the Sun's rays, and thus make it warm, and then bathe.

Diet-- Rice (raw or boiled paddy), cow's butter milk or curd, and onions are to be taken.

Such a treatment should be adopted for 6 months. This will improve the health of such convalescent persons in an appreciable manner, better than all other kinds of Tonics

If bath is taken before the eruptions subside, fever will set in, and the eruptions will come up again.

In such cases give the following:

Nutmegs Cloves Cumin seeds Piper Dichotoman	each 1½ Tolas.

Prepare a decoction and add equal parts of lemon juice and onion juice after boiling them separately, add one or two teaspoonful of honey and give in 2 to 4 ounce doses, once a day for 3 days. Then apply the following paste over the eruptions.

The leaves of Althae plant and camphor, in equal parts, say, 1 tola each. Triturate and mix with castor oil, about 4 ounces.

For Opacity or ulcer of the Coruea.

Take the tender shootings of the Palmyra palm tree (that which spreads into

fan like leaves) bruise and squeeze the juice into the eyes every day, in drops.

or

The flowers of Moringa Plerogosperma	equal parts.
,, Tribulus Terrastris	
,, Tabernaemontana coronaria	
Cumin seeds.	

Bruised and folded in a clean cloth and the juice squeezed into the eyes every day, in drops.

CHAPTER XVI.

Cholera.

This infectious and fearful disease has been referred to as Oozhi Katru. (Oozhi—the end. Katru—Air). Therefore, it means that the disease is fatal and is caused by the contamination of the air. The contamination of the air causes the infection of water and food and the human bodies by the taking of such water and food. Epidemics of cholera spread, specially in particular seasons of the year, and in crowded centres and places of pilgrimage, where unusually large numbers gather. It is

very often found in marshy tracts. The fact that the ancients had a shrewed sense in regard to the cause of the disease and have described preventive measures and remedies for the same, shows to us the wide sphere of observation and carefulness they possessed. Admonition has been made that prevention of this infection can be effected by covering the head when a person moves about in the infected area. This shows that the infecting agents are present in the atmosphere and easy entry is possible through the scalp, the tender parts of the ear, the region of the neck, the cheeks and the nose. Further admonitions, as using of Camphor for breathing in, reveal to us the need for keeping the air antiseptic. All constitutions in the infected area are not easily susceptible to the infection and therefore an emphasis upon our conception that certain constitutions are characterised by great strength of resistence as determined by Vatha, Pitha and Kapha energies inherent therein.

This disease is said to destroy the contents of the blood and make it watery and produce watery motions. More interesting are their classifications and treatment of the

different varieties of Cholera. Three types have been mentioned:—

(1) Komban; (2) Kudarpaduvan; and (3) Akkaran.

Symptoms.

1. *Komban*—There will be vomiting, diarrhoea, exhaustion, chillness, sweating, neuralgic pains all over the body, cramps, dry tongue, hiccough, colic, and Janni. If any part of the body is touched, it will appear as a moist gum and slimy. Pulse will be absent in the wrist. It will kill a man in 12 hours. Soon after the first motion, it will produce fainting and prostration and exhaustion.

2. *Kudarpaduvan*—Irresistable diarrhoea, deafness, trance, colic pain below the navel region, after profuse watery motions blood and mucous will be excreted, cramps and neuralgic pains, body will become chill, feeling loose joints, the motions will appear watery, cramps of the internal organs of the abdomen while vomiting, and lead to a state of collapse. If the patient survives for 3 days, after the attack, he will recover.

3. *Akkaran* Diarrhoea motions will appear, like that of indigestion, and of the constituency

of thick syrup. The undigested food will be passed in the motions. Severe thirst, Chillness of the body, and there will be myalgic pains from the chest downwards and in the extremities. This will appear as indigestion in the beginning but gradually all other symptoms will develope.

In all the 3 kinds of Cholera, trance, chillness, cramps, hard and quick breathing, deafness, the change of voice, pain on the region of the liver, sweating, dark colour of the nails, absence of the pulse, pitting of the eye balls, contraction of the cheek, and non secretion of urine will be generally found. In some cases, worms also will be found in the motions and vomit.

Treatment.

Melt in a frying pan 3 tolas of Potassium Nitrate (8 times purified according to the methods of its manufacture in the factory) and while it begins to melt, add to it equal quantity of the Umbilical Cord of the first child, delivered for the first time, cut into small pieces and after they are melted together allow it to cool. A kind of Sunnam or Calcined Basma of the salt will be formed.

The above Sunnam
Purified Corrosive submate
,, Crude calomel(Native)
,, Cinnabar
Camphor
Opium
Powdered dry ginger.
,, pepper
Pure Musk
Seeds of Cannabis Indica
Saffron

equal parts.

Triturate with the decoction of Cannabis Indica for 8 hours, with the decoction of Plumbago Zeylamia for 16 hours, and finally with the juice of Datura leaves for 8 hours to the constituency of a pill mass. Make into pills of the size of a pepper, dry in the shade and preserve in bottles.

Doses.

For the 1st variety of Cholera:—

Administer one pill, dissolved in brandy or country Arrack (½ ounce)

For the 2nd variety:—

Dissolve 2 Teaspoons of Turmeric powder in about 2 ounces of water, set aside and decant the supernatent fluid, and dissolve one pill in it and administer.

For the 3rd variety:—

Fry one tola of Pepper lightly, and churn with 4 ounces of water, boil and reduce to ¼, strain, and dissolve one pill in this decoction and administer.

Repeat after 4 to 6 hours, when necessary or according to the virulency.

Another Formula.

Powdered dry ginger
,, Pepper
,, Cumin seeds
Each 3 Tolas.

Powdered Long pepper
,, Ajwam seeds
,, Hyocyamus Niger
White poppy seeds (Kasagasa)
Valeriana Indica
Cardamom seeds
Cloves
Abies webbiana
Coriander seeds
Flowers of Banhinia Tomentosa
Arrow root flour
Barringtonia Racemosa
Magharapoo (Tamil) ?

Rhus Suceedanea
Three myrabolans
Celastrices Paniculata
Wrightia Tinctoria seeds
Saaraiparupu (Tamil)
Liguorice root
Anacyclus Pyrethrum
Aplotaxis auriculata
Cubebs
Embelia ribes
Galls
Saffron
Bezoa (Gorochan)
Musk
Ginnamon bark
,, Tamala
Aconitum Hetrophyllum
Clerodendram Serratum
Alpinia Chinensis
Root of pepper tree
,, Long pepper tree
Rubia cordifolia

Each 2 Tolas.

Camphor Tola.
Jaggry (Sugar cane or palmyra palm) 18 Tolas.
Purified cannabis Indica 12 Tolas.

Fry and powder finely and Triturate with sufficent quantity of Honey to form a pill mass.

Preserve in a glass bottle.

Dose 10 to 30 grains.

Make into a round ball and swallow with water, three times a day, for all the three kinds of Cholera.

Along with any of the above preparations the following decoction should be frequently given to prevent thirst, collapse and peritonitis or tympanitis:--

Achyranthes Aspera root
Tamarind bark
Horse Radish bark
Crataeva Religiosa bark
Plumbago Zeylanica root
Indigofera Asphalthoides root
Calatropis Gigantia Flowers
The small berries (shell not formed) of Cocoanut palm

Each 3 Tolas.

Bruise and boil with 8 pints of water and reduce to 2 pints.

If the body is found chill, rub over the body, the following powder:-

Powdered Camphor	1	ounce
Cowdung ashes	10	,,

(mix well)

Diet:—Fry the rice and boil as a conjee, and add pepper, salt and the leaves of Mrraya Konigii (curry leaves), making into a thin gruel.

Take 4 lbs of Sugarcane juice (Red variety), rock it in a basin for one or two hours, pour it in an earthenware jar, cork and seal with cloth, bury the jar in a pit and close the pit with earth. Remove the jar after 3 to 6 months. Strain the liquid and perserve in well corked bottles. A Strongly fermented wine will be formed. Give in teaspoonful doses, every 3 or 4 hours, well diluted with cold water.

CHAPTER XVII.

Diagnosis.

The need for diagnosis, the methods and the instructions for the physician have been elaborately dealt with. Emphasis has been laid on the paramount necessity for understanding the patient and his ailments from a study and observation of the external

and the internal conditions under which he is placed. The physician is one who evinces a keen interest in the progress and welfare of the family as a whole, and the economic possibilities of the individuals concerned. The physician must not be satisfied with the more examination of the patient from a study of any one of the aids suggested, but should take a comparative and synthetic view of all the aids and symptoms indicated by the patient.

The external causes may be due to the excessive and the perverted use of (1) the special senses, (2) the body, (3) the mind, (4) the seasonal variations, (5) the natural disadvantages of the age, (the growing or declining period of life which will determine the capacity to yield or withstand the diseases and to be profited by treatment). Other factors, as extraordinary or voluntary use of persons of all kinds and sudden mental shocks, incidents of sorrow or joy or exitements should be carefully enquired and noted. The importance of external causes cannot be under-valued, for they produce tangible effects upon the working agencies and the engines in the human body, and individuals vary in their

adjustment of these. Therefore, he is the right physician who makes a proper note of these and traces the causes of derangements and adopts the necessary measures and secures suitable conditions for recovery.

Eight methods have been suggested and these eight, measure the position of the patient in his relation to the control of the Vatha, Pitha and Kapha energies which have their being and movement in the physical frame. The Pulse indicates the forces of the movement of the three energies. The eyes indicate the colour, the discharges, and the sensations of heat or cold as determined by the predominence and derangement of the doshas. The movements in the ears which are felt by the patient himself and the experiences he has therein are the additional indications by which the diagnosis can proceed. The observation of the body, i. e., the skin with its colour and feeling phenomina is a further aid suggested. Recent discoveries have shown the value of the functions and secretions of the skin in the economy and maintenance of the human organism. The tongue with its coatings and tastes is a powerful indication of the resultant actions of Vatha, Pitha and

Kapha. The vocal cord and the manner of speech, besides exhibiting the dominant play of the triple energies, reveals not only the physical and the physiological but also the intellectual and the emotional aspects which affect the patient and which are influencing him. The motions (the faecal matter) of the patient, their colour and constituents, the presence or absence of worms are indications of the doshas, since they are constituting one of the main excretary processes under the propelling influence of the Law of Vatha, conditioned by the chemical changes of the three energies. The urine being another of the secretions of the human system, manifests the condition of the patient by its colour and composition, and therefore, deserves careful analysis. These are the important aids for proper diagnosis and undue emphasis upon one, to the neglect of the other is incomplete and inaccurate. Therefore, the science of Nadi has always been viewed not apart by itself, but certainly studied in its synthetic relation to the foregoing other tests.

1. The Pulse.

The Doctrine of Pulse has been outlined in Chapter X and we shall here enumerate

certain practical points in relation to the movements of pulse in diseases, as illustrations of their close study.

We should recall to our mind the matrais or the units of strength of the rhythm of the pulse noted in that Chapter. The strength of Vatha, Pitha and Kapha is in the following proportion, $1: \frac{1}{2}: \frac{1}{4}$. The Vatha, Pitha and Kapha are manifested in the main carriers, Idagalai, Pingalai and Sushumnai, respectively. When these are working with and worked by the Apana-Vayu (resulting in CO_2), the Prana-Vayu (oxygen), and Samana-Vayu (Nitrogen energy) differences in the motions of the energies are caused and therefore the chemical processes and the strength of the rhythm of the Pulses vary. This import and conception should not be forgotten and strict injunctions are given for the need of an adequate realisation of the proportionate strength of the waves of Vatha, Pitha and Kapha. Bed side study and care are enjoined upon the physician. The study of death signs is of great interest and each of the Siddhas has elaborately dealt with the science and the premonitions for death. In all these observations, we find a beautiful blending of the effects of the

symptoms and indications of all the phenomina of pulse, the movements of the ears, the eyes, the body and the skin (the structural basis), the tongue, the sound or speech, the motions and the urine. It is difficult to divorce one from the other, for the emphasis will become one sided and the rationale will lose its harmony and unity. But for purposes of study. an analysis in presentation is imperative and hence the points noted below in relation to pulse.

Pulse indicating the derangement of Doshas.

1. *Vatha*---The measured rocking of the cradle, in which a baby sleeps. The movements of cobra, leech and Onan, that of the birds that hop over; and that of the tortoise.

2. *Pitha*—The walking of swan, peacock, dove, sparrow, and the sacred eagle, followed by the gestures of the lion.

3. *Kapha*--Walking of cock, crane, sparrow, spider.

4. *Vatha-Pitha*—Walk like a small bird followed by fluttering of peacock and calotes veisicolor.

5. *Vatha-Kapha*–walk like a wild cock followed by the flutter of leech.

6. *Pitha–Kapha*--crawls like a snake, hop and flutter like a frog.

7. *Indigestion*—Walking of an elephant out of its senses.

8. *Appetite*—Flutter like a small crow.

9. *Janni*–In certain types, as if a man carrying a load on his head and walk with difficulty. In other types, Swing and flutter followed by the slow movements of a swan and leech.

10. *Suga Janni* Dull movements of hens, snakes and small rats followed by a stillness after a fluttering flame of the lamp wick.

11. *Vatha Fever*—Jump and flutter like a fish in water, followed by calmness of a cobra that was frightened when caught and again appear as a troublesome elephant.

12. *Pregnancy*–the Vatha pulse appear as if an ant crawls, or shake like a tortoise, or appear soft as cotton to the touch, and indicates the phenomenon. Also

appears like a Kundalapushu (A kind of worm that rolls itself up—Tamil Lexicon). Jumps like a Locust during the 3rd month of pregnancy.

13. *Vikara Nadi* (abnormal)–Pitha pulse appears as if a worm is turning to its dorsum or the kindling of sudden flames by pouring ghee over the live charcoal, or the sudden taking to wings of parrots, or ebb and flow of tides in the ocean, or flutter of palpitation.

14. *Bootha Nadi*—Pitha pulse, indicating the force of a stone thrown at a distant object, the attack made by a ram, the pestle attached to the working of the oil mill, the hissing sound of a musk rat in anger and pouncing, the rising of a rubber ball thrown on the floor.

15. If Kapha beats above the normal, tongue will be sweet, if Pitha, bitterness, and if Vatha, acid taste.

16. If Vatha is doubled in volume, the body will be painful, confusion of thought, loss of appetite will result.

17. In fever due to indigestion, Vatha will be seen like the rolling of a ball. If Vatha is confined to the feel of one finger and roll within that area and moves slowly, there will be mild fever. Fast movement of Vatha, rising above the limit of the one finger feel, indicates Malaria.

18. *Constipation*—Vatha wave moves backwards and flutters, showing accumulation of old faeces.

19. *High fever*—Vatha does not show its full movement and moves like a worm and subdued. Dosha will follow in seven days. Tongue will be disabled and speech becomes incoherent. Movement of Vatha in small and big waves, rolling and hopping and throbbing like the cut end of the tail of the lizard, shows complications.

20. *Rheumatism*—(Sarvanga Vatha). Vatha pulse can be felt like the scratching of the earth by the fowls.

21. *Dysmenorrhoea*—(Soothaga Vayu) and other menstrual disorders. The waves of the three pulse (Vatha, Pitha and

Kapha Nadis) cannot be distinguished from one another and lose their natural rhythm on account of complete exhaustion.

Death signs in Pulse.

1. Fluttering of the three waves like the wings of a bird followed by the persistence of the disease under question shows collapse in 10 months.

2. Kapha resembling the movement of the horse raising its head and chest erect shows death within a month.

3. Kapha pulse assuming the movement of the Pitha in the morning, Pitha fluttering in the noon, the absence of Vatha will end the life soon.

4. Kapha becoming disordered and fluttering like a leech caught and prevented from moving, shattering and throbbing, death will ensue in 7 days.

5. Fast throbbing of the pulse and a swelling movement of the same at the waist, thigh, and below the chest and the presence of only one kind of pulse at the wrist with excessive thirst, dull sight and open mouth, show the imminent death.

2. The Eyes.

In Vatha affections:-Eyes become dark coloured (smoky) and restless, secrete watei, tearful, rolling of the pupils.

Pitha ,, becoming hot, red or green in colour.

Kapha ,, Pale and muco-purulent discharge.

Janni ,, Red shot and greenish.

Jaundice ,, Yellowish.

3. The Ears.

To the touch:—hot or cold.

Hearing—dull, deaf or normal.

Any discharges or pains. The sound heard, very useful in prognosis.

4. The Body.

The colour of the skin, the warmth or cold, palpitation of the organs, enlargement or swelling or painful places, the smell emanating therefrom, perspiration or dryness, soft or rough.

5. The Tongue.

Vatha—Dark, fissured glands enlarged, feeling like thorny leaves. Taste-Acid.

Pitha—Yellow and red. Taste-bitter.

Kapha—Pale, and secreting excessive saliva. Taste-sweet.

Tri-dosha–Assuming all colours, dark, rough, dry, excessive saliva.

6. The Mouth.

Teeth:— Vatha—Dark or slightly blackened, often assuming the colour of the ashes.

Pitha—Yellowish.

Kapha—Pale.

Tri-doshas—Mixed colours.

Speech:— Hoarse, loud, weak, confused, coherence or incoherence.

Vatha—Medium tone, neither loud or low.

Pitha—Emphatic voice.

Kapha—Enfeebled.

Tri-doshas—Different kinds,

Smell:—Foul stinking or normal.

7. The Motions.

Constituency of the motions:-constipated or loose.

Colour:—Vatha—Dark.

Pitha—Yellow or red.

Kapha—White or pale.
Tri-doshas—Varying colours.

8. The Urine Analysis.

The Urine analysis in this system is intended to find out the predominence of the Tri-doshas and also the prognosis. The process is very simple, and requires no equipment or a laboratory. Only the chief modes of analysis in common practice are noted below:—

1. Colour of the Urine.—
   (a) Opaque or milky indicates—Vatha.
   (b) Slightly yellowish red, — Pitha.
   (c) Deep yellowish red, — Jaundice.
   (d) Frothy urine, — Kapha.
   (e) Deep red, like Saphire—is a dangerous sign.
   (f) White as milk—is a difficult case.
   (g) Honey colour shows the disease will be cured with some delay.
   (h) Straw or yellow colour—disease will be cured.
2. Examination of Urine by Gingelly oil (Sesame) process:—

Take urine in a cup of china or glass. Place the cup in broad day light. Pour one drop of the oil slowly over the column of urine.

The elongation of the spot of oil indicates Vatha.

If it spreads on all directions, it is Pitha.

If it looks like spray, it is Kapha.

In Tri-dosha, all the above 3 varieties will be seen.

If the oil drop separates in many drops, or if the drop does not divide, the disease will be cured slowly.

If the oil drop spreads slowly, the disease will be cured early.

If the oil sinks to the bottom, it is difficult to cure the disease.

If the oil drop appears like the limbs and frame of the human body, fish, temple (Holy) with surrounding space, elephant, hill, umbrella, bunch of hair, sacred fan used in Hindu temples, Lotus flower elephant tusk, cap, mirror, conch, Veena (the musical string Instrument), a square house, leaf of momordis charantia, lotus flower bud, chair, the patient will be cured.

If it appears like a drum, pot, pig, the potter's wheel, the disease will be cured slowly.

If it appears like 1; 3 or 4 legs with flabby constitution, headless trunk of the body, knife, spear, pestle, bow, bill hook, snake, cat, rat, bottle gourd, fowl, tiger, monkey, lion, horse, cobra, betal creepers, bullock, bird flying, tortoise, scorpion, or if the space of the oil area contracts or foams and disappears, the disease is incurable or fatal.

The examination of the urine constitutes a distinct branch by itself and the "Nirkuri Sastram," the science of the examination of the urine, is of great interest.

CHAPTER XVIII.

Prognosis.

The principles and methods of prognosis have been amply described. Here again, one cannot escape the conception and the practical application of the Laws of Tri-dosha. Successful prognosis depends upon a faithful, careful, and intimate study of the symptoms and the working in the patient's body. Isolation of functions of the different organs lead to confusion of the issues and therefore a thorough observation is necessary. All the functions in

the human body reveal in speech, feeling, smell, saliva, and all the movements of the eyes, limbs, and work of the stomach and the heart deserve a careful notice. The patient's capacity for assimilation and maintenance of life is affected by diseases and careful bed study is needed for making a correct prognosis. Besides the principles mentioned each physician has his own rich field of experience to help him to make a correct forecast.

For instance, the whole procedure has been made by the sense of touch and the intellectual skill of the physician which contribute to the scientific work with which he is entrusted. He has to remember the methods of operation along which the Pancha-Boothas, the energy carriers, and the energies and the Nadis carry their work and respond to the treatment from time to time.

The following points have been noted and they show to us the importance of the diligent study and observation to be made. The Literature on this subject is profound and a thorough study of the same will amply repay.

Symptoms observed in patients, indicating bad prognosis.

1. If the speech is like that of Veena instrument, the death in 2½ hours.

Trumpet	25 ,,
Blowing of conch	50 ,,
Loud and echoing	17 days.
Noise produced while shaking together a number of Cypraea Moneta (Varatica, Kavdi, or choli) shells	1½ ,,

2. When the patient's body appears to the touch, as that of

the back of crocodile, death in	12 days.
the back of tortoise	56 ,,
the tail of the fish	45 ,,
Icy-chill	30 hours.
Moderate heat or chill	2 days.
Extreme hot	1½ ,,
the elephant skin	12 hours
the wood	56 ,,
the stone	45 ,,
the thorns in lotus creeper	12 minutes
the edge of the chisel	56 ,,
the file	45 ,,

3. If the body appears.

Red as the Sun and glazed, death in 2 months.

Red as Moon and glazed	3	,,
Bright red, like live tinder and glazed,	4	,,
Gold colour with glaze	5	,,
Pure white and pale,	6	,,
Dark and glazed,	7	,,

4. If the bitter articles do not taste bitter, and other articles taste bitter. death in 1 week

If sweet articles are not sweet and other articles taste sweet 1 month

If sour or acid articles are not sour and other articles are sour or acid. 15 days.

If pungent articles appear so changed ½ a day

If saltish articles appear so changed. 1 hour.

5. If the patient does not realise the natural smells of the following flowers,

Bamboo flower	death in 7 minutes
Margosa ,,	7 hours.
Pandanus odorotismus	17½ ,,
Agathi grandiflora	7 days
Cassia Fistula	7 months
Small champaga	14 ,,

6. If the faecal matter is dry and of the size of the Goat's, he will die.

If Jelly like — it is slightly good.
White — good
Red earth — not vey good.
Dark — bad.

7. If the Saliva is like

cocoanut water—it is the best
milk ---very good
butter or cream good
white and cardy-- bad
frothy as that of horse worse.

If the patient could not spit the saliva anc adheres to the mouth or tongue, it is a bad sign.

8. If the urine is creamy like ghee, if it amalgamates with ghee, and burns when a wick is lighted with it, he will die soon.

If the quantity of urine passed is unusually large, in fever, diabetes, and syphilis, and if the urine is not secreted in anaemia, chlorosis, diarrhoea or sprue, it is dangerous to life.

Many other dangerous signs are noted under Urine Analysis.

Other Signs.

If the patient observes his wrist smaller than its actual size, when placed in contact with the bridge of his nose between the eyes, he will survive; on the other hand, if it appears to him larger than the normal size, he will die shortly.

If the patient's shoulders do not quiver, when his ears are pinched from behind his back, without his knowledge, the death is near. If he realises the pinch, he will recover.

When the palms of the patient's hands press close on his ears, if he does not realise the noise, like the waves of the ocean, he will die in 7 days.

If a patient suddenly loses his sight, he will die in 5 days. (Such happenings are common in Nephritis—*Author*).

If the nostrils cannot inhale the smell of an article placed before him, he will die in 3 days.

If the tongue does not realise the natural taste of a thing, he will die in 2 days.

If the body does not feel the touch, he he will die in a day.

When the ears and nose look stiff and shoulders drop down, the chest raised, paleness of the aqueous humour and the lens, indicate dangerous signs, and will end the life.

If the patient passes watery motions, dark in colour, hates the bed and rolls on the floor, and if the motions are passed before the urine flows, indicates danger.

If the patient cries with hoarse throat. unconsciously and in delirium, as "Lift, lift," he will die.

If the patient speaks unconsciously, imagining that the dead friends or relations stand before him, and attempts to jump out of bed, imagining that the Holy Vemanam (the celestial charriot) has come to carry him, or mutter often that the Yama (king of Death) has come or scratch the floor unconsciously, indicate danger.

Oedema on the back, extremities, chest, rectum and the generative organs, combined with chillness, are dangerous.

If the breathing that comes out of the nostrils is cold and through the mouth warm,

combined with excessive thirst, indicate danger.

Foul smelling diarrhoea in anaemia, chlorosis, dyspepsia, pthisis, cystitis, diabetes, rheumatism, jaundice, and the 13 varieties of Sannipatha,, are dangerous signs.

Hiccough, oedema, hard breathing are dangerous symptoms in sannipatha, chlorosis, dyspepsia, diabetes, sprue, fevers, chronic diarrhoea and pthisis.

The following complications indicate danger:

Diabetes in Mega Roga, Rheumatic pains in diabetes, Hiccough and colic in Rheumatism, dyspnoea in Hiccough, Spasms in Dyspnoea, Carbuncles in Diabetes, excessive thirst with Carbuncles, burning sensation of the body with excessive thirst, fainting with burning sensation of the body, cold and clammy perspiration with fainting.

If there be sweating, phlegm in the throat, and Hiccough in the above diseases, the patient will rarely recover.

Gastritis in Rheumatism, Diarrhoea in Gastritis, Peritonitis in Diarrhoea, Phlegm in the throat in peritonitis, Hiccough in diseases affected with Phlegm indicate danger.

Certain signs observed from the pulse, indicating danger or death.

If Vatha and Pitha wave in the pulse, submerge in Kapha and revolve, death is immediate.

If the three waves quiver like the fiddling of a Veena instrument, death in 3 days.

If Kapha wave appears like the hopping of a tired frog or roll and creep like snake, death is immediate.

If Pitha waves roll and turn like a worm to its back, or suddenly rise up like a live charcoal tinder while ghee is poured over it, or sudden rise of a parrot when frightened, or rise and fall like waves of the ocean, or quiver and fastly palpitate, indicate danger.

If Pingalai nerve force, viz., Pitha wave is prominent for the whole of the day, without alteration, death in 3 years.

If Vatha is prominent for the whole of two consecutive days, death in 2 years.

If Vatha is prominent for three consecutive days, death in one year.

If Pitha wave appears smaller than normal and looks like a raging sea drawing back its waves in confusion, death 6 months.

If Pitha appears dull without oscillation for 2 consecutive days, death in 3 months.

If the above is observed for 3 consecutive days death in 45 days.

If Kapha wave is prominent for

3 consecutive days, death in			5 days.
2	,,	....	10 ,,
1 full day,		....	15 ,,

25 hours and change, will recover under the treatment.

If Pitha wave appears greater than the normal shape and size for three days consecutively and appears like the frequent protrussion of the tongue of the Cobra, or moves like the rocking of the bell, or like the gradual measured increasing sound of the beggar's hand trumpet, will end in death.

In Sannipatha,

Burning sensation all over the body, high fever, dry tongue, excessive thirst, vomiting, Hiccough, Dyspnoea, Syncope, low muttering delirium, are dangerous symptoms.

Body feels chill, unconsciousness with delirium, thirst, Diarrhoea, cough, apnoea will lead to death.

Fissured tongue and lips, high fever, malena, Hiccough, numbness, deafness will stand in the way of recovery.

Pain all over the body, cough, vomiting, thirst, Hiccough, fainting, painful head and chest, when combined together, obstruct recovery.

In Convulsions:

Diarrhoea, Dysentry, Dyspepsia, Pthisis, Chronic fever, Chlorosis, Diabetes, Oedema followed by convulsions are incurable signs.

In Diarrhoea and Dysentries of all types:

Motions appear like flesh or honey, followed by hiccough, Dyspnoea, oedema sweating, are bad complications.

If the above disease occurs in women during pregnancy or after delivery, it is very difficult to cure and also if anorexia Indigestion, and colic follow.

In Mega Rogas:

Diabetes, Rheumatism, Colic, Hiccough,

Dyspnoea, Carbuncles, thirst, fainting Sweating are bad.

Cold and clammy perspiration, gurgling noice of choking phlegm in the throat, with Hiccough, lead to death.

In Pulmonary Pthisis:—

Continuous high fever, excessive phlegm, perspiration, Haemoptysis and Haematemisis show that treatment may not be effective, wasting of the muscles, high fever, exhaustion, difficult breathing are dangerous signs.

Chillness of body, hairs standing erect on roots, are bad signs.

With all the above symptoms or with a few of them, if there be acute neuralgic pains in the joints and on the back bone, the death is at hand.

In anaemia and chlorosis.

Excess of Pitha and Vatha with dysentry is a bad sign.

With the above symptoms, if mucous is frequently passed in the stools, and phlegm, hiccough, and fainting follow, will lead to death.

In dyspepsia and gastralgia.

Vayu troubles, diarrhoea, tympanitis, phlegm, hiccough, are difficult to cure.

In metorrhagia and menorrhagia

Burning sensation all over the body, dirty coloured discharges, stinking smell, palpitation of the heart, dyspnoea, phlegm, cough, will gradually emaciate the body and recovery is difficult.

When a patient is suffering from any disease, if he unconsciously moves down from the headrest to the side of the foot, in his bed, he is sure to die in a week.

Practical Hints.

Tie a bandage cloth soaked in ghee or oil around the wrist and remove after 1½ hours and observe the following:

If Vatha pulse jumps and draw back, death immediate.

If it curves like a snake, in 22 days

If it kicks and draws back 9 ,,

If it crawls like a leech 3 ,,

If it springs like a string, death before the day passes.

If it moves to a side, go forward and then draw in, death in 30 days.

If the pulse (all the three) is belt hot and soft or walk like a swan, the patient will recover.

If the sole of the left foot is felt cold and the right hot, and the knee joints become cold, death in 10 days.

If both the knees are felt cold, sweating on the top of the head, nose stiff, hiccough and hard breathing, body cold, sight hazy, death in 3 days.

If the back of the neck, torehead, and front of neck felt cold, eyes become blue, and phlegm is found in the thıoat and chest, death in 3 days.

If one nostril, and the bend of one elbow felt cold, and if the sole of the left foot warm and there is irritation of the throat, he will die in 5 days.

If the thighs and the soles of both feet felt cold, and both the ears appear stiff, death in 2 days.

If the sole of the left foot is warm, the right sole is cold, perspiration found on the

If Pitha pulse flutters, death in 3 days.
Vatha ,, 8 ,,
Vatha and Pitha ,, together 5 ,,
All the three ,, ,, 48 ,,
,, ,, like the cut end of a lizard in 1 day.

If the three, together flutter like the tail of a scorpion and move like a boat, death will ensue in one month.

If the right nostril and the sole of the right foot are felt hot and if the left nostril becomes red when rubbed, and the whole body is felt warm or hot, the patient will recover.

If the eyes, nostrils, ears, top of head, navel region, soles and palms, turn pale and the feet become cold, death in 2 hours.

The 10 stages of approaching death:

1. The patient will feel, as if he smells the smoke of the burning dead body.
2. Talks Philosophy or abuse others whom he does not like.
3. Confusion of thought.
4. Exhaustion and hard breathing
5. Looking up the roof.
6. Body becoming chill.
7. Likes to take food.
8. Hazy vision.

9. Body turning pale.
10. Death.

If the face is assuming the elongated appearance, as the shape of the needle, and if the veins become prominent, if the sight becomes very hazy and dark with dryness in tongue and increase of delirium, it shows the ensuing death.

CHAPTER XIX.

Moral Code for the Physician.

The moral code laid down for the physician in this system is of great importance and high ethical value. The physician and his functions form a necessary link in the social organism and therefore the Siddhas have not failed to bring home to the mind of the physician his duties and responsibilities to the society. The injunctions prescribed help us to conclude that the practitioners of the System cannot show irresponsibility and should not trifle with humanity. The value of the individual life is sacred and therefore, all possible care should be taken by the physician to equip himself fully for the tremendous responsibilities of his task.

The physician should observe the following principles.

1. To be always ready to attend the sick without hesitation at any time of the day and night.
2. To get thorough grasp of the Science and the art of healing by a disciplined study under a Guru (Teacher).
3. To learn to prepare medicines himself well and according to sciences.
4. To treat all women as his mother or sister.
5. To be affable, instil confidence in his patients and to win popularity by his charactor and kindness.
6. To diagnose intelligently and to be scrupulous about details given by patients and about the symptoms observed.
7. To be careful in giving decisions and not to threaten patients.
8. To avoid falsehood, to show kindness to men, women and children as God is kind to all.

9. To so conduct himself as to earn the respect and affection of his patient by showing parental care.

10. To wear clean and white dress and to avoid gaudy or spotted cloths.

11. To bathe early, to worship God, to wear sandal paste and other sweet scents when visiting patients.

12. To observe the principle of equality without distinction of caste, or colour and to treat everyone as his own.

Those who are not well versed in the science should not administer medicines and no attempt should be made to hide their deficiency in knowledge by sweet speech as, such a work, is both harmful aud sinful.

As for the patients the following, points deserve notice :

1. Hardhearted men, highway robbers, men prone to excess of anger, unchaste men and women, disemblers (men who having wealth profess poverty), misers, cannot be successfully treated.

2. Those who commit the five kinds of sins, (the evil minded, the unfaithful, those

who fear no God; who commit injustice; and are cruel to their fellowmen) are worse than deadly poisons.

3. The following deserve kind treatment and they will be cured:- The poor, the charitable, the faithful, the pious, men of good principles and lofty virtue, men of devotion and honour, those who make a plain request to cure them with confidence, those who pay liberally, according to their might, those who take the medicine with confidence and trust, and those who are engaged in priestly work and observe their Dharma.

4. The following persons are considered unworthy for treatment or acquaintance:- Drunkards, Black magicians, rogues, thieves, spendthrifts, the shameless, the enemies of physicians.

5. The physician should be careful to collect the fees due, as soon as possible. It is interesting to note that evasion of fees is mentioned and the ancients have recognised this common tendency.

Omens to be observed by the Physicians.

The omens indicate good or bad results,

or dangerous signs, observed when a messenger invites the Physician.

1. If the messenger has tied round his loins a red cloth, if he is seen scratching his hands or legs or if he speaks looking up the sky, or if the doctor is rubbing oil on his scalp before his bath, it may be determined that the patient is suffering from a disease by which he will collapse having cold in the extremities.

2. If he invites the physician by holding a post or a pillar or a wall yawning or sneezing, or cracking noise with his fingers joints. the patient can be said to be in a precarious condition.

3. If he has allowed his hairs of his scalp to fly loose in the air, holding a cane or stick in his hand, scratching his body, pulling out his finger nails, keeping his hands folded behind his back, it may be determined that it is difficult for the patient to recover.

4. If he speaks to the doctor looking towards:

(a) East the patient will get alright.

(b) South east (Agni) the patient will die immediately.

(c) South (Yama) danger or death.

(d) South west (Niruthi) – Sure to die.

(e) West (Varuna)—treatment can be attempted.

(f) North west (Vayu) piles complaint.

(g) North & N. East (Kubera & Easanan) good. If treated, can be successfully cured.

5. When the messenger goes to the doctor's house to invite him or if the doctor starts to the patient's house, if the following are seen in front of them, they are good.—

Pot with water, mutton, curd, milk drum beating, flowers, young girl, two Brahmins, chank (conch) blowing, married woman, ghee monger, Crane (Narai-Tamil) or crow or Kadai (Tamil) flying across to the right, and a Kite (Gerudan-Tamil), or cock or hen passing to the left, are good omens.

If any person with his hairs hanging loose or if a bald headed man or woman, a yogi, a sanyasi, a Brahmin, widow, person whose nose is eaten away, blind, firewood bundle on head, oil monger, goldsmith, come in front, are bad omens.

The following are the auspicious and inauspicious days for preparing and administering medicines:-

Sunday	—	auspicious for preparing.
Tuesday, Thursday	}	Do for administering.
Friday	—	will increase disease.
Monday, Wednesday, Saturday	}	produce bad results.

It is better to prepare and administer medicines on Sundays and Thursdays only.

If a person falls ill on the following days with particular asterism (star) noted against, the disease will be troublesome.—

(Day)	(Tamil)	(English)
Sunday	Bharani	Arieties & musca
Monday	Chitrai	Virginis Spica
Tuesday	Uthradam	Sagitari
Wednesday	Hastham	Corvi
Thursday	Kettai	Scorpionis
Friday	Pooradam	Sagitari
Saturday	Revathi	Piscium

Two points of criticism deserve our attention:—

1. The modern scientific world may laugh at the injunctions of omens in this ancient system. Despite the forces of modernisation, one cannot deny the existence to a very large

extent of these beliefs. Viewed rightly, these show the thoroughness of attention paid to minutest details of form and manner, procedure and approach to the doctor, and the extreme care to be exercised by him. Still the belief in the phychic and the spiritual forces that operate on us and determine the mysteries in daily life, has not disappeared altogether, and assumes importance now and then.

2. Regarding the moral code prescribed for the patient and physician, it cannot be denied that a high standard of ethical and spiritual life is demanded. It may not be possible to base the practice of medicines on such a lofty code as conceived by the Siddhas, in this age of fissiparous and disruptive tendencies that act and react on the society, and in an age when the normal code of the ethical and social conduct is undergoing a revolution. But this is helpful to the physician since it is a salutary reminder to him and through him to his vast clientale that a pure, moral., emotional, and spiritual back ground in ones character is a fundamental and imperative ingredient for human well being, the sound health of individuals and a successful cure. It reminds a practitioner that he should not leave aside the moral aspect of his

patient's life and he himself should be a living embodiment of the virtues and the social qualities enunciated in the code. He is the messenger not only of health, but also a constant example of virtue, morality, courtesy, freedom from avarice and greed (the besetting sins of mankind) and truthfulness and love. He should so move and have his living in the midst of the community of whose health and cheer he is the trusted guardian.

CHAPTER XX.

Materia Medica and Therapeutics.

Introduction.

The literature relating to the science and art of preparing drugs so as to make them useful and efficient for administration is a vast store house of information and practical hints. The basis of selection and the principle upon which the classification of drugs and delineation of their effects have been made, deserve our appreciation. The genius of the Siddhas and their wonderful knowledge of the different varieties of materials available for treatment cannot but elicit the admiration and the adoration of even the most critical minded. The dis-

covery of the working of the principles of the three Laws of Vatha, Pitha and Kapha has been the main source of inspiration that has led them to make an exhaustive survey of the products and their qualities found in the universe. Drugs have been selected from the mineral, the vegetable, and the animal kingdoms. The material basis of the body is derived from the elements that go to make it up and the conception of the Pancha-bhootas, as affording the process of growth and sustenance should be recalled. Every one of the drugs is characterised by properties and qualities pertaining to the Pancha-bhoothas. The minerals have the composition and the properties of the Bhoothas and they are divided into the following 6 kinds:— Salts—25; Poisons—64; Sub-metals—112; Metals—9; Mercury—1; Sulphur—1.

The products found in the vegetable and the animal kingdom besides possessing the properties of the bhoothas, take their origin and growth in the light of the operation of life principles. Mention has been made of numerous varieties of species (as many as 8,40,000) and differentiation has been made into groups, taking into consideration their

respective generative organs and means by which they come into existence They are chiefly four in number:— 1. Uterus; 2. Eggs; 3. Through perspiration; 4. Seeds.

The varieties of beings include—84 Lakhs., viz. Devas 11; Men 9; Beasts 10; Birds 10; The aquatics 10; The crawling insects 15; Vegetable kingdom 19 lakhs.

These numbers show the tremendous labour the Siddhas have bestowed on their study and observation of the numerous forms and shapes which are multitudinous in this wide world. Some of them are visible (sthoola) some are subtle or invisible (sukshma), and others are "Karana" which means the "subtlest and the innermost rudiment of the body-Causal frame" (Tamil Lexicon). This division of bodies as subtle visible, and karana is a characteristic feature of the ancients in their study of Nature and human life. As can be naturally inferred the subtler bodies cannot be used for medicinal purposes and only the gross and the perceptable form of the animal and vegetable kingdoms have been selected. Among the 19 Lacs of varieties of the vegetable kingdom, 3300 varieties are

marked for medicinal purposes, which are scientifically grouped under 6 main species, capable of yielding, 6 varieties of tastes.

The six species are: 1. Trees, 2. Shrub, 3. Creepers, 4. Juicy plants, 5. Juiceless plants, 6. Milk yielding plants.

The six tastes are: (1) Saltish, (2) Pungent, (3) Astringent, (4) Sweet, (5) Bitter, and (6) Sour.

It can be easily granted that the identification of these different drugs will constitute a life study by itself. Owing to the sad neglect and the vicissitudes that have attended the system by lack of encouragement and traditions of organised research, many cannot be identified and it is pertinent to remark that research will amply repay. We note only some of the varieties that are easily identifiable and in common use.

The mineral kingdom:

I. Salts: (1) Pottuluppu, Kambiyuppu, Vediyuppu, (Potassi Nitras, 2) Parayuppu Induppu, (Rock salt), (3) Kalluppu, Karuppu Uppu (Black salt), (4) Kariuppu, Common Salt (Sodium chloride), (5) Valayaluppu, English equilent not known (Bangle salt),

(6) Attuppu Salt extracted while manufacturing saltpetre from certain kinds of earth, (7) Pooneer, Uvaruppu, salt collected from certain fields that are unfit for cultivation during natural efflorescence in certain seasons of the year, identified as crude or impure carbonate of soda. (8) Amuriuppu, literally salt taken from urine, (9) Moongiluppu, Bamboo manna.

The following salts are called Pancha Lavana:— 1. Nitre, 2. Rock Salt, 3. Black Salt, 4. Bangle Salt, 5. Sodium chloride.

In addition to these, Borax, Ammonium chloride, Alum and Camphor are also considered as salts.

II. Poisons:—(1) White arsenic (Vellai Pashanam), (2) Yellow Arsenic (Gowrie), (3) cinnabar (Lingam), (4) Crude calomel (Rasakarpur), (5) Perchloride of mercury (Veeram), (6) Red Oxide of mercury (Rasa Sindhuram), (7) Orpiment (Thalagam), (8) Plumbi Oxidom (Mridarsingi), (9) Plumbi Oxidum rubrum (Eyasenduram), (10) Red Orpiment or Realgar–(Manosilai).

III. Submetals:— called Uparasam, (1) Copper sulphate, (2) Zinc, (3) Mica, (4) Magnet, (5) Karpur Silajit, (6) Asbestos

(Kalnar), (7) Asphaltum (Silajit), (8) Conch (Sangu), (9) Shells of insects and tortoises, (10) Earth worm, (11) Pearl, (12) Coral, (13) Diamonds, (14) Iron sulphate, (15) Os Sepie (Kadalnurai), (16) Red Armenian Bolus (Poongavi), (17) Cyprae moneta (Sozhi),

IV. Metals:— (1) Gold, (2) Silver, (3) Copper, (4) Lead, (5) Tin, (6) Zinc, (7) Iron, (8) Bellmetal, (9) Brass.

The vegetable kingdom:—

The names of the vegetable varieties are too numerous to mention here and many of them find a place in the several prescriptions detailed. The root, barks, stems, leaves, pulps, berries and fruits, seeds, juices, the milky secretions, gums and resins and flowers of plants and trees are invariably used.

The animal kingdom:—

The therapeutic properties of the products of the animal kingdom have found a definite place in the Science and art of the Siddhas. The hairs, nails, teeth, flesh, blood, bones, secretions, and excretions of animals and birds have been carefully studied in respect of their healing properties and definitely recognised as potent means of effective cure.

The following articles are of special significance:---

Kasturi -(Musk); Gorochan—(Bezoa'; Punugu— Civet); Amber—(Amber gris) Urine of cows, goats, ass and even of young children, milk of cows, goats, ass, and women, faecal matter of particular varieties of rats and cats, human hairs, bones of horse and fowls, the blood of hare, the nails and teeth of tiger, horns of bison, ivory, feather of peacock, skull of human beings, dogs, and asses.

The properties and qualities with the use to be made in different diseases have been detailed in respect of almost all articles, in the mineral, vegetable and the animal kingdoms elaborately and a special book entitled as "Patharthaguna Chinthamani" (The science of the qualities and properties of articles), which corresponds to the simple Materia Medica and therapeutics is worth reference. A translation of this book and of different editions of this branch of science will exceed on small a volume and it is hoped to bring out an edition soon.

Certain important details should be noted.

1. Preparation of medicines depends upon the accurate knowledge of the ingredients required,

2. Identification is an essential condition for success.

3. The specific parts to be used or the products to be corrected should be carefully selected, cleansed, and purified according to the injunctions laid down.

4. The juices of flowers, leaves, barks, or stems, should in all cases be fresh. The milk collected from plants should not be stored up for an unduly long time and should always be genuine and fresh. The principle of freshness and purity applies to the urine and the milk of animals, and mother's milk.

5. Care should be taken to remove the seeds and to throw them away whenever necessary. The seeds of the following should be carefully removed: 1. The three myrabolams called "Tripala" namely:— 1. Terminalia chebula, 2. Phyllanthus emblica and 3. Terminalia bellerica.

6. In certain preparations the parts specified to be carefully selected and should be gathered viz:— Plumbago zylonica and Ipomea Turpithum, in which the barks of the roots are important.

7. Certain cases require the removal of the barks as well as the external layers or pulps of the fruits and the use of the seeds alone is necessary. viz:- Bignomia Indica, Gmelina Arberia; (Tamil—Perungumil) Sterospermum Suaveolens, Aegle Marmelos, Prem-Integrifolia, Garlic, Ginger, Asperagus Sarmentoses Tinospora Cordifolia.

Group Names:— The following group names are in daily practice and therefore deserve special mention.

1. Trikadugu—Dried ginger, Pepper and long pepper.
2. Tripala—The three myrabolans.
3. Trikshara—Ammonium Chloride, Soda carbonas impura, (Dobhys earth) Potasium carbonas impura.

Preparations:— The following are the main kinds of preparations, simple or compound found in this system of treatment.

1. Vegetable Juices, 2. Decoctions, 3. Powders, 4. Pills, 5. Oils, 6. Confections (Lekyams), 7. Ghee, 8 Paste (Kuzhambu), 9. Waxy pigments. 10. Distilled waters, 11. Syrups, 12. Distilled acids, 13. Fumigation,

14. Lozenges, 15. Fomentations, 16. Enematas, 17. Eye preparations, 18. Reduced into Basmas, Sinduras, and Calcination, 19. Binding of—Mercury, Sulphur, Metals, and Salts, 20 Ointments, 21. Blisters, 22. Gauze.

This is the classification into which the numerous preparations mentioned and detailed in this system may fall. There are very many varieties of each kind noted above. There are laxatives, cathertics, drastics, among the purgatives. There are diuretics, sedatives, ecbolics, febrifuges, tonics, carminatives, aphrodosiacs, unaphrodosiacs, astringenis and others of therapeutic value, as found in the Western Materia Medica. The advantage of this system is, that most of them are definite correctives or specifics for Tridoshas and are intended for helping and setting right the equilibrium of the three energies. The whole of the science of therapeutics is based on the recognition of the tremendous influences of the doshas on the system and an average physician can easily select the remedies suitable to his patient. Certain purgatives and emetics alone are of great curative value and found effective in curing many diseases. The medicated oil baths cure many diseases of the

eye, the ear, the nose, the throat, and the nervous system The use of certain juices and oils is of paramount value yielding marvellous results, It has been said that the use of certain medicated oils on the sole, effect cure of the diseases of the eye; that applied on the eyes, the diseases of the ear; that on the ears, the diseases of the head; and a complete oil bath, specially applying the oil on the head, relieves the patient from many diseases and imparts to him a vitality and potency which affords a preventive for susceptibility to other diseases. This shows that the Siddhas have had a glimpse and a perfect understanding of the synthetic working of the numerous glands and organs and their common subordination to the whole. In complicated cases where the selection of remedies according to the Western science is baffling or uncertain, it is easy to select suitable remedies and therefore the fact that sometimes even the quacks are able to treat successfully by the application of some of the remedies is not surprising.

The unique feature of this marvellous system is the preparation and administration of Basmas, senduras, and sunnas and elaborate descriptions relating to the processes of

correction and calcination are given. None of the details is to be neglected, for each has a practical and scientific value.

Definition of certain terms.

1. *Kadi*.

Fermented rice water—cook the rice and preserve in water for 6 months in a clay pot. Decant the fermented water and use where necessary.

2. *Dadhimasthu*.

Boil cow's or Buffaloe's milk and curdle it by adding a few teaspoons of buttermilk, and squeeze out the juice. This is to be used in the preparations and the solid portion to be thrown away.

The Pharmaceutical Processes.

1. *Bruising*.

Cut the ingredients into small pieces and pound or smash them in a stone mortor (Fig.1) with a pestle.

2. *Trituration*

The powdered ingredients are to be placed in a stone mortar of special make,(Fig.2) and rubbed with liquids with a pestle to the

constituency of a pill mass for a prescribed time.

Fine powders, such as, Bhasmas and Sinduras are also to be treated in the same manner

3. *Instillation.*

(Surukkiduthal) The ingredients are placed on a wide mouthed frying pan (Fig.3) made of iron or burnt clay. The pan should be placed over a hearth with fire underneath and the liquids poured over the masses of ingredients in drops or teaspoonsful gradually and allowed to be dried thereon by the heat, and the process repeated until the required quantity of the liquid is exhausted or till the prescribed time.

4. *Steaming the ingredients.*

There are two processes. The one is to fill half of a mud pot (Fig.4), wide mouth, with certain liquids, and to spread and tie a piece of clean linen over the mouth of the pot. Over which the ingredients are to be spread and to cover them with another mud pan that fits exactly to the rim of the pot containing the liquid and seal the two rims together with clay cloth. Place the pot over the hearth and boil. This is called Dhoopa Yantram.

The other is called Dola-Yantram. Place the liquid in a narrow mouthed mud pot (Fig. 5), tie the drug in a piece of linen and suspend it into the liquid by means of a string and fix the string to a pole placed horizontally across over the mouth of the pot and then boil.

5. *Distillation.*

(a) Medicated Wax Oil—**Mayana Thailam.** Place the ingredients in a narrow mouthed mud pot that will hold a gallon of water and place another small mud pot that will hold a couple of pints of water, having the same size of mouth as the big one. (Fig. 6) Tie round, both the rims by means of a cloth with the paste made of the seeds of Phaseolus Roxburghii several times and allow it to be dried in the sun. Over this, bandage the rims of the two pots together with a wet clay cloth and allow it to dry. Place the big pot with its ingredients on the hearth, so that the side of the big pot may be on the hearth and the small pot be outside the margin of the hearth, as in Figure. Make a small hole underneath the small pot and place a vessel on the ground with a funnel underneath the hole, to receive the oil drops. The upper portion of the small pot, is to be kept cool with a few

layers of wet cloth, by steeping the cloth in cold water, now and then.

In the beginning, a moderate heat should be applied to enable the wax to melt and mix up with the other ingredients uniformly and then gradually increased, till the oil ceases to drop.

(b) Acids of salts called Dravakam are also prepared in the same manner, but the pot may be smaller than the previous one. In this case the ingredients are powdered and mixed together and divided into 3 parts. One part of this is placed in the big pot and sealed and distilled as before. The first few teaspoonful of the acid dropped in the vessel will be opaque which should be thrown out. The straw or pale yellow coloured acid should be collected. This liquid should be poured over the 2nd part of the ingredients and dried. Again place the 2nd part of the ingredients in the big pot and repeat the process and collect the yellow acid. This liquid also is to be mixed with the 3rd part of the ingredients which should be subjected to the same process as before. The white acid coming at first should be thrown out and the yellow acid alone collected.

(c) The third process of distillation is called Kuzhipuda Thailam. Take a mud pot with a capacity to hold ½ to 1 gallon of water, according to the bulk of the ingredients. Make two small holes at the bottom and pass an iron wire through them from outside so that the ends be outside, like the letter "U" Fill the pot with the ingredients, cover it with a clay pan and seal the rims. Place the pot on a vessel so that the holes with the wire ends be in the centre of the vessel. Then seal the rim of the vessel with the bottom of the pot, by means of the vegetable powder and also clay cloth. After drying them place the entire apparatus in a pit with some pieces of fresh Aloe pulps underneath. Fill up the pit with earth to quarter the height of the pot. Over this, cover the whole apparatus with cow dung cakes, so that it may seem like a cow dung heap. Set fire. After the fire has cooled, remove the burnt ashes and collect the oil found in the vessel. (Fig. 7)

The oils of Garlic, Sulphur, Yellow yolks of eggs, certain roots like Oleander, and of the seeds of Semicarpus Anacardium are extracted by this process.

(d) Sudar Thailam:—Spread the ingredients over a cloth and roll it into a wick and dip it in the prescribed oil and light the wick. While it is burning pour the prescribed oil over the wick, with a teaspoon and collect the medicated oil drops falling from the wick in a cup placed underneath the burning wick. (Fig. 8)

Certain compound oils such as sulphur, Neem, etc. are thus prepared.

(e) Medicated Distilled Waters:— This is liquids, juices and drugs with water as the basis. The ingredients have to be carefully mixed up after bruising them with water or liquids mentioned in the prescriptions in suitable proportions, and then distilled. (Fig. 9)

Great importance is attached to the use of earthern vessels (clay pots) in preference to costly metalic vessels, since the preparation of medicines in clay pots enhances the properties thereof.

6. *Decoctions*

1. Internal use--one part of the ingredients and 16 parts of water. Boil and reduce to $\frac{1}{8}$ part.
2. Gorgle-- do 1/5 „

3. Steaming	do	1/8	,,
4. Eyes	do	1/6	,,
5. Lotion	do	1/12	,,
6. Washing the face	do	1/9	,,
7. Bath	do	1/3	,,
8. Enema	do	1/7	,,
9. Emetic action	do	1/2	,,
10. Purgative action	do	1/8	,,
11. Conjee For one part of flour, barley, soojee, sago or rice, etc. add 64 parts of water and reduce to		1/8	,,
12. For preparing oils and ghee. Boil and reduce to		1/4	,,

The decoctions are to be prepared in a mud pot, and drunk in a cup of Gold for Pitha, of Brass alloy for Vatha, and of Copper for Kapha, diseases. For Pitha diseases the decoctions should be drunk after cooling, for Vatha and Kapha diseases it should be warm, and for all the Tridoshas it should be slightly warm. None of the liquids preparations should be reboiled.

In preparing the decoctions, the ingredients are to be cut into small pieces and bruised. The pot should be measured of its depth beforehand, and then the bruised ingredients are to be placed in it. Then water is to be

added up to the required height. A graduated stick may be used to ascertain that the required quantity of water has been added and reduced, by measuring the depth of water. Further boiling is to be stopped.

The proper way of treating the ingredients used in decoctions.—

1. The gum resins, sealing wax (Kombaraku), flowers with small petals, flours, tiny seeds and others that may float on water, are to be tied up in a cloth and placed in water.

2. The flesh of animals, barks, leaves, fruits, berries and seeds are to be boiled separately.

3. The hard parts of trees, plants, grass, and creepers and their roots are to be bruised and allowed to steep in water for sometime before boiling.

4. The hard parts of trees and plants are to be boiled for 7 days, the creepers and tiny roots to be boiled for 3 days, and the leaves, barks, fleshes, bulbous roots, and corns to be boiled for a day, for extracting their active principles to produce the desired therapeutic actions.

7. *Kalkam or Doughymass.*

All the roots, barks, leaves, and other bazar drugs that are required for preparing oils and ghee, are to be bruised and finely triturated with juices of plants or milk that are to be used for the oil or ghee before mixing them up in the preparations.

8. *Choornams or Powders.*

The ingredients are to be dried under the sun or shade or fried in a pan until they are changed brown, each of them separately, and then bruised well and strained through linen or through fine meshes of sieve. Mix them up in a wide mouthed mud pot according to the required quantity.

The nutmegs, Hydnocarpus inebriens, poppy seeds. and such other ingredients that contain oils are to be triturated in a stone mortar and mixed up with other powders.

9. *Pills.*

The ingredients are to be separately powdered and placed in a stone mortar (Fig.2) triturated with any of the liquids prescribed for the particular kind of pill until the prescribed time to form a mass that will not stick to the pestle or mortar, by gradually adding the

liquids, in their order. The musk, Gorochan, Amber, Saffron, Pachakarpoor and other aromatics are to be added lastly, and triturated for an hour before the pills are divided. The pills are to be dried in the shade and preserved in stoppered bottles.

Such ingredients, as Haritala (Trisulphuret of arsenic, orpiment yellow) should be finely triturated first, the croton seeds should be triturated along with other ingredients just before the aromatics are added.

10. *Confections or Lekyams.*

Generally all the confections are to be prepared by boiling with water, decoction or milk, the sugar, sugarcandy, or jaggery, into a thick syrup and the powders are gradually added while the syrup assumes the required constituency, and lastly sufficient quantity of ghee and honey are added after removing the vessal from the hearth. The Confections should not stick to the vessal or hand. It should be a doughy mass.

The quantity of sugar, sugarcandy or jaggery for preparing a syrup should be in the proportion of one to four parts of particular kind of decoction.

Proportion of ingredients for making Confections in general:—

For 1 part of ingredients, sugar 2 parts, ghee to be half of sugar quantity, honey to be half of the ghee quantity.

The test for syrup and the time for adding the powders:—

1. When the boiling syrup is felt by the fingers and pressed, it should produce fine fibres, then is the proper time to add the powders.

2. When the boiling syrup is poured in drops in water the syrup particles should go down and settle without being dissolved in water.

Such seeds of volatile and essential oils, as almonds, acroot, Pistha are to be shelled and well cleaned, triturated with water, and their essences added to the boiling syrup before it attains its constituency.

11. *Medicated Oils.*

(a) *Process by Boiling*: The various ingredients used for this kind of oils are to be made into decoctions in the first instance. The soft ingredients are to be boiled with four parts of water and reduced to the quantity necessary

for each kind of oil as described under decoctions. Those that are slightly harder than the first are to be boiled with water 6 times of its weight; the harder ones with 8 times; and the hardest 16 times of their weight.

If an oil is prepared with the ingredients mixed up with water, the milk should be $\frac{1}{4}$ the quantity of the oil. If it is prepared with roots and barks, the quantity of milk should be $\frac{1}{6}$ of the oil. If it is prepared with juice of plants, mutton, curd, or buttermilk, the quantity of milk should be $\frac{1}{8}$.

(b) *Fixed and Volatile oils*:-Oils extracted are of 12 kinds.

1. Those that are prepared by boiling the bruised seeds with water are called *Boiled oils* - as the oil of castor seeds.

2. Those prepared by boiling the yolk of eggs or butter are called the *Melted oils*.

3. Those that are prepared by the destructive process are called *Puda Thailam* (See Fig.7)

4. Those oils that are subjected to distillation process, such as, Sandal wood oil etc. are called *Distilled oils* (Fig.9)

5. Those ingredients triturated and placed under hot sun, when oil is formed, are called Adhava Thailam.

6. That which exudes from earth is called Earthly oils.

7. That which exudes from the cut ends or trunks of a tree is called Virugga Thailam.

8. That which exudes from rocks is called "Sila Thailam"

9. That which is expressed from the civet is called "Neer Thailam"

10. That which is prepared by steam process is called Steam oils or Avi Thailam, like the preparation of Volatile oils from Frankinsence and other balsams.

11. That which is prepared by the combination of mercury and other ingredients by rolling into a wick, dipped into oils, and burnt like wick of the lamp, and which exudes oils in drops is called *Sudar oil* by destructive process.

12. That which is prepared by grinding in a mill is called Yanthra Thailam or Mill oil.

These are again grouped into 5 kinds.

1. Mudi Thailam (Mudi Head) That which is applied to the Scalp.

2. Kudi Thailam (Kudi—Drink) That which is used internally.

3. Pidi Thailam (Pidi—Massage) That which is rubbed or massaged externally.

4. Thulai Thailam (Thulai—Hole) That which is instilled or syrenged into the 9 holes of the body.

5. Seelai Thailam (Seelai—Cloth) That which is used for ulcers and Sinus generally soaked in a gauze.

The different kinds of fuels or firewood that should be used in boiling the oils:—

(a) For preparing oils for fever and other kindred diseases, Cassia auriculata and Pavania zeylanica, fuel is to be used.

(b) For the oils to be used into the eyes, ears, nose and feet and also for internal use the fuel of jujube tree (zizyphus jujube) and Oonjal tree (Tamil), Black Sirissa is to be used.

(c) For oils for massaging the painful parts of the body or to produce heat in the parts, the fuel of Tamarindus Indica, and Bassia Latifolia is to be used.

Where particular kinds of fuel are unprocurable, any single variety of fuel possessing the quality of the above, may be used.

Oils for bathing are to be made in the following order to suit the Tridoshas. There are 3 kinds of processes and tests.--

1. *Mridhu Pakha or the Soft process*:— In this case the sediments are formed into the constituency of wax with water traces, when examined while boiling. This Pakha or stage is useful in Vatha Doshas.

2. *Sikku Pakha*:—In this case the sediments are sticky to the touch, and in this stage the oil is useful in Pitha Doshas.

3. *Manal Pakha*:—The sediments in this stage are like sands to the touch, and the oil taken in this stage is useful in Kapha disorders.

Such oils taken before the first stage and after the third stage are injurious to the health.

All the flavouring agents such as, the powders of Pachalai, Poolangilangu, Curcuma Azedoaria, are to be added before the oil is removed from the hearth while still hot; set it aside so that the sediments may settle down to the bottom. Decant and strain without disturbing the sediments. Repeat the decantation until all oil is drawn out.

Never squeeze the sediment to express the oil. Finally before corking the bottles, the cevet, Amber, Saffron, Pachakarpuram should be powdered and added; if prescribed.

These oils should be kept buried in the grains of paddy for 3 to 48 days before use. This last process will ward off all injurious effects.

Bathing:— The water used for bath should be boiled with the leaves of mango tree and is to be filled up in 2 tubs or to be poured on the head so that every part of the body may be sprayed.

For washing the oil from the body, use the paste prepared out of Acacia Concinna, the sediments left behind after pounding the seeds of Bassia Latifolia for extracting oil, or the powdered leaves of Oonjal tree. These serve as soaps.

When the oily preparations contain ghee, the flour of phaseolus Mungo called green gram, should be used for soap. Some medicated oils will cure certain diseases of the eyes if rubbed on the soles of feet. Some cure the ear diseases if applied into the eyes. And

some others cure the diseases of the head such as migraine and other kinds of head aches, if oil is dropped into the ears or nostrils.

The time for oil bath in several seasons after sunrise:—

15th Ap. to 15th June	—	before 9 a.m.
16th June to 15th Aug	—	,, 10 a.m.
16th Aug to 15th Dec.	--	,, 8-30 a m.
16th Dec. to 15th Feb.	—	,, 7 a.m.
16th Feb. to 15th Ap.	—	,, 9 a.m.

To preserve health in the tropical climate, one should have oil bath twice weekly. males on Saturdays and Wednesdays, women and children on Tuesdays and Fridays.

On days of oil bath, one should avoid heavy and undigestable foods, curds, sexual intercourse wandering in the sun, rain, and winds, exercises, any labour causing exhaustion, alchoholic drinks, any internal medicines, narcotics, tobacco in any form, and sleep during day time.

12. Reduction processes,

1. *Basmas* are generally of white colour and some are of ashy grey and float on water.

2. *Sinduras* are red, black, blue and dark, and grey or yellow in some cases.

3. *Sunnam*—are white in almost all cases, and in a few they are ashy grey, and they turn red or brown when mixed with Turmeric Indicating calcium.

Generally the Basmas float when sprinkled in water showing their feather weight but in all cases they are not so.

The latest test, for metalic preparations is to pour a few drops of Nitric acid on it. If they emit smoke or fume with the odour of the metals if any, coloured brown or red, the metals are not properly reduced and are thus unfit for internal administration. In such cases, they are to be again submitted to the burning process called "Pudam". (explained below)

The Gold, Mica and Silver will have to be submitted to Pudam, until their gloss or brilliance passes off. Test a few grains by rubbing between the fingers.

Thus every article should be reduced into ashes. Only in such an assimilable form, the preparations will act in the system. Otherwise they are injurious to health. The various processes for preparing them are detailed below:—

1. The Metals, Uparasas, etc. are to be triturated well with the prescribed juices and made into lozenges, dried well, and placed in a mud pan, in such a manner, that one lozenge does not touch the other, and cover the pan with another mud pan of the same size, without crevice. Then seal both the rims together (Fig 10.) with a cloth socked in fine clay, and allow it to dry. Submit this to the prescribed process of *Pudam* until the metal is completely reduced to ashes. The mud pans should be allowed to cool down of their own accord. Then the pans should be separated carefully slitting, without allowing dust to get in, and examine the ashes as directed. When complete they should be finely triturated and stored in well stoppered bottles.

2. The ingredients are to be triturated well with various juices, milk or decoctions as above, made into lozenges and enclosed in certain paste made of vegetable roots or barks and submitted to pudam, as prescribed.

3. The ingredients are treated as before, dried, and enclosed in Chunam (Quicklime, calcium), paste applied on cloth and rolled as a ball and again dried and submitted to pudam.

4. The ingredients are treated as before, dried, powdered and enclosed in a flask and placed in the centre of a mud pot containing sand. Place the pot on the hearth and apply heat for certain fixed hours. Allow it to cool of its our accord and remove the contents from the flask, powder and store as before.

5. The dried lozenges are to be enclosed as above and placed in a mud pot without sand. Submit the pot to the above process.

6. To fry the ingredients with the aid of some juices or vegetable powders or roots or stickes until the ingredients turn into ashes, by combus'ion.

7. Articles like Harts horn should be cut into pieces, and the morrow should be scraped off, purified by keeping them socked in various juices, and placed directly over the cowdung cakes and set fire.

8. Some metals like Tin and lead are first purified, and then made into thin plates, cut into small pieces. On a rough cloth over which some vegetable powder is spread up, place the cut pieces without allowing them to come in contact with each other, roll and burn from one edge.

9. Some articles like Haritala, tin etc., are to be introduced into a hole, made in certain bulbous root or trunk of wood, corked with the same material, sealing the slit portion with clay cloth, and the whole burnt with cowdung cakes.

10. Some ingredients are powdered and triturated together after purifying them and used as it is.

Pudam: is the process of burning with cowdung cakes in the manufacture of Basmas, Sindurams, and Sunnams. They are of 6 kinds, viz;

1. Kadai (Turnix Taigoor)
2. Kowdari (Indian Partridge)
3. Kukudam (Cock)
4. Varagam (Pig)
5. Kajam (one yard)
6. Ganam (about 2 yds)

These Pudams are named after the birds and animals etc. to indicate the approximate height of each. (e. g.) "Kadai" Pudam means the calcination or reduction of metal etc. in a pile of dried cow dung cakes approximating to the height of the bird, Kadai.

The cowdung cakes should be of equal thickness, circular in shape, and weighing about 15 Tolas each. Any slight variation will not injure, but any abnormal variation will mar the therapeutic actions of the ingredients.

Process:—Dig a pit and spread the cakes one by one on all sides, put the mud pans in the centre and fill up the pit with cakes covering the pans on all sides to the prescribed height and set fire at the top of the heap. Until the fire completely burns and cools the pans should not be removed.

13. *Mezhugu.*

It is a semi solid preparation approximate to bees wax or pigment. It is made by triturating the ingredients to soft mass according to the direction.

14. *Ghrita* (Ghee)

The principal basis is cows ghee. Mix up the ingredients with the juices or decoctions and boil until all water is evaporated. Set aside and decant the ghee and strain. The sediments to be thrown out without squeezing as in the case of oils.

15. The process of extraction of mercury from Cinnabar.

1st method.

The native cinnabar called Hingula in Sanskrit, and Lingam (ulanda) in Tamil, which appears as reddish brown and shining masses, are to be broken into small pieces of the size of a small bean, and rolled as a ball with pieces of cloth of the size of a cocoanut. Take an Iron frying pan and place this ball in its centre; cover the ball with a wide mouthed mud pot by placing 3 or 4 pieces of flat stones 1" in height around this ball, so that the mouth of the pot rests over them for the air to enter. Sprinkle some kerosine oil over the ball and set fire to it and cover up the prepared pot over it. In 3 to 6 hours everything will be burnt off and the pot will be cooled. The mercury will stick on to the pot and some may be found in the frying pan Pour cold water over all the vessals and wash the ashes. The mercury will be separated from the ashes. Filter this mercury through linen several times until all the ashes are cleared. By this process, 3 tolas of Hingula will yield 1½ to 2 Tolas of mercury. (Fig. 11)

2nd method.

Take a big pot to hold the Cinnabar crystals, and another smaller one that fits

well to the mouth of the big one, so that both the rims fit well. The small one should be painted with the juice of the leaves of Erythrina indica (Indian coral tree), inside the pot, and dried in the sun. This process should be repeated 7 times. Powder the barks of plumbago zeylanica about ½ to 1 lb., and place it in the bigger pot, over which the small crystals of cinnabar is to be spread up. Seal the rims of the 2 pots together with clay cloth, dry, place the bottom of the big pot on the hearth. Set fire to the hearth and burn gradually for 8 to 12 hours. Allow it to cool. The particles of mercury will be found adhering to the ccated portion of the top pot. Wash them in water and collect. (Fig. 12)

16. The method of extracting oil and flowers or crystalline substances from "Frankincense".

This is a gumresin containing oil, having a fragrent smell and commonly used in India for fumigation. In its crude form, it is used in Gonoverhea by mixing with ghee. It is an antiseptic and used in ulcers or wounds. It is a hepatic stimulant and a stimulant expectorant and an antiseptic, internally.

The volatile oil is a fragrant one, and in this form, it is convenient to use internally in 1 to 5 minimum doses. It is a very good liniment for head ache, myalgia and neuralgias and it is non-irritating. The flowers are used in pills in this system, for enlargements of the liver and spleen along with Gorochan, and also in respiratory diseases.

The flowers are extracted as follows: —

1. Cup containing powdered frankincense
2. Paper cap or cone.
3. Mud basin containing sand to the brim of the cup. (Fig. 13)

Place 15 Tolas of pure frankincense powder in the cup, attach a paper cone to the brim of the cup, the top of cone to be tied up well so that the fumes may not evaporate. Fill the basin with sand to the brim of the cup. Place it on a hearth and burn a lamp with a wick of the size of an ordinary lead pencil, fill the lamp with oil of neem seeds, (Margosa oil). Burn for 8 to 12 hours and let it cool of its own accord. After it is cooled gently remove the cap. The cap will contain needle like crystals. Collect and preserve in glass stoppered bottles.

are purified and corrected in the manner prescribed. The underlying idea is that the therapeutic actions are due to the corrected state and the media of correction ought not to be deviated unless allowed.

1. *White arsenic*-- Roll with pieces of cloth into a ball, and place it in the steaming of clothes by the dhoby. Repeat this 7 times.

2. *Yellow arsenic*-- Triturate equal parts of pepper and seeds of phasedus roxburghii with the milk of calatropis gigantea, apply over the mass of arsenic, dry, and roll into a ball with cloth and submit to bhoby's steam. Wash with young boy's urine.

3. *Cinnabar*.- Steep in honey and mother's milk for a day in each, and submit to the process of 'Surukiduthal' with the following for 3 hours, equal parts of the juice of acalypha indica, lemon juice and mothers milk.

4. *Crude calomel*: (Rasakarpooram) Submit to the process of 'Dola yantra' in the decoction of pepper and betel leaves, after steeping in it for 3 days.

5. *Perchloride of mercury*: Place in a 'Dola yantra' 2 or 3 pints of tender cocoanut

water and a pinch of camphor. Hang the perchloride mass rolled in a piece of linen, above the water level and boil until the water is evaporated.

6. *Rasa Sindura*: Steep in mothers milk for 12 hours.

7. *Orpiment* (Haritala). Keep the mass within a heap of quick lime and sprinkle ass's urine or boiling water, wash it after the heat subsides. Repeat this process 10 times.

8. *Bisulphuret of arsenic*: Dolayantra with Goat's urine.

9. *Mercury*: Drawn from cinnabar need not be submitted to any correction. That which is obtained from the bazaar should be treated as follows:

Steep in the milk of calatropis gigantea for a day and then triturate for 3 hours with each of the following. Powdered bricks, cob webs, country sugar (sugar cane sugar) and lemon fruit juice.

10. *Sulphur*. Melt with low fire and pour cow's milk. While melting add a few drops of cow's ghee. Repeat the process 10 times.

11. *Gold*:—Reduce into thin plates, after applying over it a paste of Red ochre and burning in a charcoal furnace to red hot.

12. *Silver*:— Burn red hot–and reduce to thin plates or filings.

13. *Lead, Tin, Zinc*: - Melt by adding a pinch of Ammonium chloride and pour the oil of the seeds of Bassia Latifolia. 7 times.

14. *Copper* Make it red hot in a furnace and dip in a solution made of the paste of the leaves of Moringa pteregosperma, quick lime, and water, 7 to 21 times, or in the Juices of Tamarind leaves, Acalypta Indica, butter milk and Khadi, 7 times in each.

15. *Iron*: - Steep the iron filings in lemon Juice for a day, mix with gingelly oil and roast, wash with Khadi, and finally boil in a decoction of the bark of Acacia Arabica.

16. *Magnet*:- Boil in lemon juice, and Khadi and heat and steep in the juice of cow dung 7 times.

17. *Iron Sulphate*: - Fry white.

18. *Mica*: – vide-Basma.

19. *Aconite*:— Cut into small pieces and keep them steeped in cow's urine for 3 days and dry in the sun.

20. *Cannabis Indica*:—Remove the seeds and sticks adhering with the leaves, and keep it steeped in pure water containing a pinch of common salt for a night, and wash well with water 7 times. Squeeze with a clean linen, and dry them up in the shade.

21. *Croton Seeds*:— Vide article on the subject.

22. *Dried Ginger*:--Scrape off the external layer, apply a paste of quick lime—dry and wipe the chunam.

23. *Pepper*:— Keep them steeped in sour butter-milk for 3 days, wash, dry, and fry gently.

24. *Long Pepper*:- Keep them steeped in lemon Juice for a day and dry.

25. (a) Smilax Glabra Orchinensis (b) Withania Somnifera (c, Ipomaca Turpethum	Cut into small pieces and boil in cow's milk for 3 hours and dry in the sun.

As for the drug (c) take only the root bark and throw off the central fibre.

26, *Acorus Calamus*-- Burn in charcoal and use in the preparations. This should not be administered in a raw state.

General Hints.

The Juices are to be procured fresh always, at every time.

The roots and barks--- To be selected from matured plants and it is stated that the roots that spring to the north of the tree possess more virtues than the rest.

The Decoctions are to be fresh and those that may be kept for a week should be boiled and strained everytime before use.

The powders - of barks and roots and seeds, called choornam ,may be kept on for 3 to 5 months, without any deterioration.

The pills of vegetable products may keep its virtue for a year only and that containing animal product, such as,musk, gorochan, or arsenic and mercury preparations will keep on indefinitely.

The oils for bath will maintain its efficacy for about six months; for internal use, from 1 to 2 years; the external applications, such as, for dressing of ulcers from 1 to 2 years and the liniments for the same period,

The confections or Lehyams, will loose their action after 6 months, especially those that contain milk, ghee, and plant Juices.

The confections that contain no milk or ghee or Juices, but prepared in a raw state will keep on indefinitely if honey is added.

The Ghritham or Ghee preparations will not become rancid till 6 months.

Pastes are to be prepared fresh every time.

Waxy pigments called Mezhugu will become effective as they grow old.

Distilled acids will keep on indefinitely in a well stoppered bottle.

Fumigation products should be fresh.

Lozenges will keep on from 6 months to one year.

Fomentations should always be fresh.

Enemates—-the medicated waters to be fresh and oils of not more than a year old may be used.

Eye preparations, except lotions, pastes, and Juices which should be fresh every time. the other preparations will keep on indefinitely,

The Basmas, sinduras, calcined or bound products, produce good results as they grow older and the virtues will keep on even after a century.

Ointments will keep their virtues from 6 to 12 months.

A general Formulae of Doses.

Juices, adult	1 to 2 ounces.
Children	½ to 1 Teaspoons.
Decoctions, adults	1 to 2 ounces.
Children	1 to 2 Teaspoons.
Choornams, adults	¼ to 2 Tolas.
Children	5 to 15 grains.
Pills, adults	1 to 10 grains.
Children	¼ to 4 grains.

According to the nature of the ingredients contained in them.

Oils (internal), adults	½ to 2 ounces.
Children	½ to 1 Teaspoon.
,, (containing poisonous ingredients), adults	5 to 30 minim.
Children	1 to 5 minim.
The Basmas, Sinduras, Sunnas, and bound products, adults	¼ to 5 grains.
Children	⅛ to 1 grain.

South Indian Measures and weights.

Measures.

8 Ashaku	1 Measure	
8 Measures	1 Marakal	
5 Marakals	1 Parai	
12 Marakals	1 Kalam	
360 Paddy grains	1 Sodu	
5 Sodu	1 Ashaku	$\frac{1}{8}$ Measure
2 Ashaku	1 Ushaku	$\frac{1}{4}$,,
2 Ushaku	1 Uri	$\frac{1}{2}$,,
2 Uri	1 Nazhi	1 ,,
8 Nazhi	1 Kuruni	8 Measures
2 Kuruni	1 Padhak	4 Vallams
3 ,,	1 Mukuruni	6 ,,
2 Padhaku	1 Thooni	8 ,,
3 Thooni	1 Kalam	24 ,,
1 Vallam	4 Measures	

The present official measute is 66 tolas
(Capacity)

Weights.

$3\frac{3}{5}$ Kundri (Abrus Precatorius seeds)	1 Panavidai
32 ,, or 9 Panavidai	1 Varaganidai
$1\frac{1}{4}$ Varaganidai	1 Kashanju
10 ,, (360 Kundri)	1 Palam
8 Palams	1 Seer
24 ,,	1 Pucca Seer
40 Kundri	1 Kashanju
5 Seers	1 Viss

Ancient weights and approximate modern equivalences (Imperial).

1 Kundri	2 Wheat grains or 4 Paddy grains or $1\frac{7}{8}$ grains
10 ,,	1 Scruple
32 ,,	1 drachm (60 grains)
1 Varaganidai	6 grains
1 Panavidai	7 grains
1 Kashanju	75 grains
$7\frac{1}{2}$ Varaganidai	1 ounce
1 Tola	180 grains or 1 Rupee Silver coin
3 Tolas	1 Palam
24 Tolas	1 (Kacha) Seer
66 ,,	1 Pucca Seer
40 ,,	1 Pound (lbs)
120 ,,	1 Viss
8 Viss	1 Maund

Time.

60 Minutes	1 Horai 1 hour
24 Horas	1 day
60 Vinadi	1 Nazhigai
$2\frac{1}{2}$ Nazhigai	1 Horai 1 hour
$3\frac{3}{4}$,,	1 Muhurtham
$7\frac{1}{2}$,,	1 Jamam 3 hours
8 Jamam	1 day 60 Nazhigas 24 hours

THE SIDDHA PHARMACOPOEIA.

Basmas and Sinduras.

1. Copper Basma.

(a) Take thin pieces of Copper piates purify, apply a thick paste made of the leaves of Polygamum Barlatum. Place in a mud pan crucible, cover with a pan of the same size, seal the edges with clay cloth, and submit to Gajaputa, (1000 cow dung cakes), cool, and collect the Basma, Triturate into fine powder.

(b) Take very old copper coins, steep them in the juice of Boerhavia Diffusa (Swellia Punarnava Sans); Vellai- Saranai (Tamil) for 7 days. Remove the coins from the juice (fresh) Repeat this process seven times.

Prepare a pair of tubular cup shaped Tin (Vel, Vangam -Tamil), crucibles, that fits, into one another, with closed bottom. Place the coins into one crucible, and pour over them, an ounce of the above juice, cover with another crucible and seal the entire crucible with seven layers of clay cloth, Roll over this, rags of linen, to the extent of a cubit ($1\frac{1}{2}$ x$1\frac{1}{2}$)like a foot-ball. Pour castor oil over this ball until the linen is completely wet

with it to its entire depth. Set fire to the cloth ball Let it burn down completely and allow it to cool. The coins will be found burnt into ashes. Triturate into fine powder.

(c) Corrected Copper filings 3 Tolas
,, Mercury }
,, Sulphur } 1 Tola each.
,, Orpiment }

Triturate with milk of Calatropis Gigantea for 24 hours, prepare lozenges of the size of half a rupee silver Indian coin, dry, enclose in clay pans, seal the rims with clay cloth and submit to Gajaputa (1000 cow dung cakes) cool and remove the lozenges fron the pan, triturate again with the juice of Boerhavia Diffusa (called in Tamil the particular variety Sathi-Saranai) for 1 day, prepare lozenges and dry as before, enclose in pans and burn as before with Gajaputa.

(d) Correct thin plates of copper as follows:—

1. Apply over the plates, a paste made of Panchalavana and Lemon fruit juice, burn them over a furnace (Black Smith's) red hot and dip immediately in a pot containing the juice of Vitex Negundu leaves. Scrape off the saline crust. Repeat this process 7 times.

2. Again apply over the plates, a paste made of Thri-Kshara (Sarja-Kshara, Yavakshara, and Navachara) with Lemon fruit juice, burn red hot, dip in the above leaf juice as before, repeat 7 times.

3. Take a plate weighing 3 tolas, apply over this a paste made of 1½ tolas of mercury and 1½ tolas of sulphur, triturated with the milk of Calatropis Gigantea (white flowered variety) uniformly on all sides. Dry, enclose in a clay pan crucible—seal—and submit to Gajaputa. The copper plate will be reduced. Triturate this with the following.

Honey, sugar cane jaggery, cow's ghee, Borax and the seeds of Abrus Precatorius, each ¼ tola.

Prepare Lozenges—dry—enclose and seal in clay pan, and again burn with 1000 cow dung cakes. Repeat this processs 3 times.

Powder finely—and store in bottle

Dose:— ½ to 3 grains twice a day.

Any of the above preparations of copper may be used in the following diseases with appreciable results.

In all kinds of diseases of the digestive system, such as gastritis, gastralgia, acute

and chronic dyspepsias, haemoptysis, ulcers of the stomach and liver. Also, in enlargements of the spleen and liver. In all forms of leprosy, chronic rheumatism and arthritis. Diseases of the bones and joints and of the nervous system. Piles and Fistulas.

Modes of administration.

Aphrodosiac—in Ghee—for 24 days.

Myalgia—in Garlic oil—for 3 days.

Vathajwara—in honey do

Sannipatha—in the boiled juices of the following barks:—Vitex Negundu, Morringa Pterogosperma, and Crataeva Religiosa for 3 to 6 days.

Pitha disorders–in Eclipta Erecta juice for 48 days,

Dhamaraka Vayu— (diseases of the heart like, angina Pectoris)—In Decoction of Smilax Chinensis, the roots of Clerodendron Inerme and Tri-kadu $\frac{1}{4}$ tola each; boiled with $\frac{1}{4}$ seers of water and reduced to $\frac{1}{8}$ of it, for 48 days.

For all kinds of Leprosy and chronic skin diseases—In inner pulp of the seeds of

Hydrocarpus Inebrieus and Garlic oil, for 48 days.

Ascites—In cow's urine for 7 days.

Chlorosis and Orchitis–In Goat's urine for 7 days.

In all other diseases–In Honey or Ghee.

No restriction of diet—use plenty of ghee, butter and curds. Avoid tamarind. In Sannipatha and Ascites—Rice conjee or Barley conjee to be administered without salt.

2. Rasa Basma—I (Mercury)

(a) Mercury drawn from Cinnabar 24 tolas.

(b) Distilled acid of the following:—
Nitre 30 tolas and Alum 72 tolas.

Powder and mix together. Distil and collect acid which is yellow.

Place the mercury in a stone mortar, pour over it a couple of ounces of the acid and keep it under the Sun's rays. In a few hours, a layer of white powder will be formed. Collect these in a bottle. By repeated pouring of the acid over mercury, the whole quantity will be reduced to white powder.

(c) Collect and store them in a stoppered bottle.

(d) Take about 2 lbs of hen's Egg Shells, (hatched) boil them in the following solution, Slacked lime ½ lb, Dhoby's earth (Saraimannu or Uvarmannu—Tamil) ½ lb, and water 4 lbs.

For two hours, wash in water, clear off the mucous membranes adhering inside, wash and dry.

Take purified egg shells	24	tolas.
Allum ,,	24	,,

Triturate them in stone mortar for 10 hours in each of the following:—

Lemon juice and white of hen's eggs.

Prepare lozenges of the size of half a rupee silver coin (Indian), dry them under the sun, and submit to Pudam, with 500 cow-dung cakes. Allow it to cool, collect the lozenges and powder.

(e) Take equal quantities of the prepared flowers of mercury (c); and egg shell basma (d); triturate with sufficient quantity of acid (b); again for 2½ hours. Prepare lozenges as before, dry, enclose and seal in a clay pot. Place the pot over the hearth, and burn for

10 hours, by gradually increasing the heat. Cool and powder.

Dose: -- 5 to 10 grains twice a day, mix with sugar cane jaggery and administer for 6 days. No diet restrictions.

For all kinds of Diarrhoea, anaemia, chlorosis, and menstrual disorders; Jaundice, Dropsy, asthma, chronic Bronchitis; Piles and the attendant diarrhoeas caused by the same; Vatha and Pitha disorders: Gastric troubles and pains; all kinds of Kapha diseases; and the body to become firm. Ascites, Pitha pandu, bilious form of anaemias, Leprosy, Black spots in any part of the body said to be a type of Mega roga, obesity, spasmodic coughs, migraine, neuralgia,rheumatism, arthritis, synovitis primary, secondary and tertiary syphilis.

The preparations of mercury in the form of Basma, possess a very powerful action in the body. They correct the irregular composition of the blood and thus maintain the equilibrium of the Tri-dathus.

Therefore, the Basma of Mercury, is a valuable acquisition to the medical science.

3. Rasa Basma—II.

Triturate 3 tolas of mercury with the juice of Sphaeranthus Indicus, until the mercury turns into a pill mass, or when the mass is squeezed, mercury does not flow in a free state, make the mass into a round ball, cover this with a paste made of the above leaves, and dry it. Again cover with seven layers of clay cloth and dry under the sun. Burn with 20 cakes of cowdung.

Dose:— 2 to 5 grains twice a day, in sugar cane jaggery for 7 days.

Diet:—Use only cooked Rice and hot water. Avoid all other articles of food, including salt, tamarind, ghee, oil etc.,

A specific in scrofula and Soolai Rogas, such as arthritis and diseases of the bones and joints.

4. Rasa Basma—III

Take an Iron frying pan and clean it with brick dust until the interior part becomes bright. Pour in it 2 seers of the juice of Acalypha Indica and 1½ tolas of Mercury. Place the pan over a hearth, boil and be triturating the mercury in the juice while it is boiling. Boil until the juice evaporate and the mercury is

left behind. Continue frying the mercury until it is reduced to ashes—be triturating with a spoon or rod of Iron.

Dose and actions are as the previous one.

5. Rasa Basma--IV

Prepare by destructive distillation an oil of Sulphur and Wild Garlic, equal parts as follows:

Bruise garlic and sulphur and place them in a mud pot with a hole at the bottom. Attach a china cup to the bottom. Seal the top of the mud pot with a mud pan and clay cloth tightly. Place the mud pot in a pit containing some pieces of Aloc Indica fresh petals removed of their external sheaths. Arrange cowdung cakes from half of the mud pot in a heap and set fire at the top. After cooling, remove the pot and collect the oil found in the cup.

Take 3 tolas of corrected mercury, triturate with the sulphur oil for 2½ hours, place under the sun. The paste will turn into ashes. Again triturate the ashes with the same oil; make into small lozenges, dry them up; enclose in clay pan crucibles seal with clay cloth and

submit to a pudam of 20 cowdung cakes. Cool and collect the lozenges, powder and use.

6. Aya Senduram (Iron)—I.

New Iron filings	1 seer.
Powders of:—	
Tinospora cordifolia	1 seer.
Three myrabolans each	1 seer.
Juice of the fruits of:—	
Eugenia Jambolana	1 measure.
Bark juice of Jambolana	1 ,,

mix together in a new mud pot and set aside for two months. Dry them in the sun. Place in an Iron frying pan and fry until the vegetable ingredients become ashes and blown of in the air, leaving the iron alone. When the Iron filings are red hot, pour into the pan one seer of cow's Ghee and fry until the ingredients take combustion. When cooled, the filings will be found red. Powder in a stone mortar and bottle it.

Dose:— 1 to 3 grains b. d. in honey or ghee.

7. Aya Senduram—II.

Steep in lemon juice 12 tolas of Iron filings for 3 days, wash with water and

similarly in the country vinegar (fermented Rice water) and also in the milk of Jatropha curcas.

Finally, triturate with the latter milk for 12 hours, make lozenges, dry, enclose and seal in clay pan crucibles, dry and burn with 1000 cowdung cakes. Repeat 10 times.

Triturate and burn as before and also with the following, as noted against each.

(1) Barks of Myrica Nagi, Euginea Jambolana, and the entire plant of Aloes, equal parts, bruise together and collect the juice. Steep in this juice for 25 days and then burn the lozenges triturated with the same juice. Repeat 64 times.

(2) Yellow leaves of Eclipta Erecta (Potralai Karippan- Tamil) and Tinospora Cordifolia equal parts, bruise and collect the juice.

Triturate and burn 25 times. Finally powder the lozenges and store.

Dose: ½ to 3 grains b. d. in honey or ghee,

For Anaemia, chlorosis, general dropsy, eye diseases, obesity, improves the blood, a

powerful tonic, and aphrodosiac. Hairs will grow in the bald head, and the grey hairs will turn black.

In general, this will rebuild the seven tissues of the body, correct the three dadhus and improves the general tone of the body.

Such minor ailments as, indigestion, anorexia, nausea, debility, weak sight, hearing, sprue, and digestive and intestinal troubles will be cured.

8. Sulphur Basma.

(a) Corrected sulphur 3 tolas.
Leaves of Amaranthus Tristis 3 ,,

Triturate well for 24 hours continuously, make lozenges, dry, and enclose in clay pan crucibles; seal and burn with 20 cowdung cakes.

Dose 2 to 5 grains b. d. in honey.

Acute or chronic skin diseases, syphilis, rheumatism, arthitis, scrofula, boils, abscesses, carbuncles and chronic ulcers.

(b) Corrected sulphur 15 tolas.

Triturate with the white yolk of hen's eggs for 3 hours, make lozenges, dry, enclose in clay pan crucibles, seal and place the pan

under the sand, over which arrange 10 cow-dung cakes. Set fire and burn. Cool and take out the lozenges and again repeat the same process by increasing the cowdung cakes to 15 times and to 20. After burning three times in this manner, triturate the lozenges with the juice of the leaves Aegle marmelos, make lozenges, dry, enclose in crucibles, clay pan, seal and burn with 25 cow dung cakes. This time, the sand need not be used.

Cool and power the lozenges.

(c) Corrected sulphur — 2 tolas.
Burnt ashes of the barks of Terminalia Arjuna — 1½ seers.

Take a mud pot with narrow mouth, fill in it, ¾ seers of the ashes and press them down, place over this the sulphur, fill up with the remaining ashes by pressing all round. Place this pot over a hearth and burn with mild heat for 3 hours. Cool and take of the sulphur, dust the ashes from the sulphur mass.

Prepare a cup out of the leaves of Acalypha Indica and Amaranthus Campestris by triturating them together into a paste; allow in to become firm after airing a while, place the sulphur into this cup, cover with a lid

made of the paste of the same leaves, enclose the cup with the layers of clay cloth—dry—and burn with 3 cakes of cow dung.

The doses and action are the same as the former.

(d) Take 3 tolas of purified sulphur and triturate with equal quantity of mushroom (Agaricus Campestris), make lozenges, dry, enclose and seal in crucibles and burn in kaadai pudam.

9. Magnet Sinduram.

(a)	Purified magnet	3 tolas.
	,, sulphur	3 tolas.

Triturate together with the milk of Calatropis gigantea for 6 hours, make small and thin lozenges, dry, enclose in clay pan crucibles burn with 20 cow dung cakes. Repeat this 9 times. During the 10th time add to the prepared magnet, ¼ of its weight, Nitre and triturate with the same milk (calatropis) make lozenges, dry, pack in clay pans and burn with 10 cow dung cakes. Cool and powder.

Dose 1 to 2 grains b.d.

For anaemia and Chlorosis—in honey.

(b) Purified magnet ... 12 tolas.
Finely powdered root
barkes of cassia Auriculata 12 tolas.

Triturate together with the juice of Aloe leaf pulp for 12 hours make small lozenges, dry, enclose in a flat bottomed clay pot (specially made with clay with heavy bottom to stand the heat), apply a cover lid, seal and burn over the hearth adjusting the heat in moderate degrees to conflagration for 12 hours. Set aside after 12 hours collect the lozenges, finely powder and store.

Dose ½ to 2 grains in honey or ghee b.d.

A specific for sprue, chronic diarrhoea, and all kinds of diarrhoea in anaemia and chlorosis.

Diet: avoid all pungent articles, use plenty of butter milk.

10. **Rasa Karpura Basma** (Crude calomel),

Corrected Calomel	3 tolas.
Alum	6 tolas.

Melt the alum and insert while melting the mass of calomel in the centre and heat until the alum is excicatted. Powder finely and store.

Dose ½ to 2 grains in honey and other suitable vehicles b.d.

Influenza, Bronchitis, and Syphilitic affections.

11. Veera Basma (Corrosive Sublimate).

Corrected Sublimate 1 tola.

Place the mass between the powders of dog's skull, in a crucible, seal with 3 layers of clay cloth and burn in Kaadai Pudam.

Cool and Powder.

Dose:—¼ to ½ grains b.d. in honey.

In complications followed by pneumonia such as Phlegm Gurgling in the throat; Influenza, Plague, and in all stages of collapse.

12. Gold Basma—I

Triturate 54 grains each of Gold leaves and corrected Hen's egg shells together and drop in it 5 drops of the milk drawn from the plant of Daemia Extensa (not the juice of the leaves) and mix. Place this in a gold smith's crucible, ccver it with a lid pan, seal with clay cloth and dry.

Take a big mud pot, fill half of it with the paddy husks, place the crucible over the

husks, fill up with more of the husks. Burn, cool and powder.

Dose: ½ to 2 grains in ghee, butter or honey. b.d.

Aphrodosiac. Reduces the fat and increases the vitality. Rebuilds the seven tissues of the body, also useful in asthma and pulmonary pthisis.

13. Gold Basma—II.

Immerse 1 drachm of gold in the juice of the leaves of Solanum Indicum for 3 days, wash, file into small atoms and triturate with the juice of Euphorbia Pilulifera (slightly red tinged variety), for 6 hours. Prepare lozenges dry and apply a paste made of the leaves of Anthocephalus Cadamba, half an inch in thickness, enclose in a mud pan crucibles, seal with seven layers of clay cloth, dry, and burn with 100 cowdung cakes, cool and powder.

This is a special process for Leucoderma, and Leprosy. In treating such cases, the Gold Basma is mixed with the following vehicle and administered for six months continuously.

Place 8 seers of the juice of the leaves of Trichosanthes Palmata under the sun, until

it turns into a pigment or pillmass. Add equal to its weight of the mass, the leaves of Adathoda vasika, triturate well and add 3 tolas of civet and gold basma, triturate well and prepare pills of the size of a phyllanthes emblica fruit. Dry them under shade, until they become hard. Keep these pills immersed in about 6 to 8 seers of Gingelly oil. Swallow one pill morning and evening for 6 months.

Rub the gingelly oil, in which the medicine is kept immersed, to the scalp and body, and take oil bath once a week.

14. Gold Sinduram.

Gold leaves	54 grains.
Mercury drawn from cinnabar	432 grains.

Triturate with the juice of Artemesia Indica for 6 hours, make lozenges, dry, pack in pans, burn with 25 cow dung cakes. Again triturate with the juice of Trichodesma Indicum and burn as before.

Dose and action are as the Basma.

15. Silver Basma—I.

Fine silver filings	3 tolas.
Ashes prepared by burning the tender shootings of the edges of the roots that spring from the branches of the Banyan tree	3 tolas.

Triturate together with the juice of the tender edges of the roots found on the branches of the Banyan tree (by bruising them) for 7½' hours, into a pill mass, prepare lozenges, dry, enclose and seal in clay pans, dry-and burn with cow dung cakes heaped to the size of 1½'x 1½'x 1½'. Repeat this process three times

Dose:- to 2 grains b.d. in ghee.

Cools the system, increases the strength of the 7 kinds of tissues of the body. Gleet and similar urinary troubles will be cured. An aphrodosiac.

16. Silver Basma—II.

Fine silver filings	3 tolas.
Hen's (hatched) egg shells (boiled in sodium carbonate solution and purified by removing the internal mucous membranes)	3 tolas.

Triturate together with the juice of Aclypha Indica for 7½ hours, lozenges, dry, enclose in clay pans, seal, dry, burn, with 100 cow dung cakes. Repeat three times.

Slightly yellowish Basma will result.

Dose:- 1 to 2 grains in ghee b.d. Uses as No. 1.

17. Silver—III.

Melt 3 tolas of pure silver and while boiling with bubbles, pour gradually over it, 6 tolas weight of the fresh flower juice of Mimusops Elengi. The silver will loose its hard and pliable qualities and can be powdered easily.

Triturate this silver with the juice of the same flowers for 3 or 4 hours and make lozenges and dry. Apply over these lozenges a paste made of the roots of Gynandrosis. Pentaphylla (Mukkavelai-Tamil)and the above flower juice, dry, enclose in gold smiths crucible, place a coves lid, seal, and burn with 100 cowdung cakes.

18. Silver—IV.

Silver filings	1	kalanju (1 Kalanju $\frac{1}{6}$ oz
Mercury	1	,,
Ammonium Chloride	1	,,
White arsenic	1	,,

Triturate with the juice of the leaves of Rhino-Canthus Communis for 10 hours continuously, make lozenges, dry, enclose in clay pans, seal, burn with 30 cowdung cakes, cool and see if the lozenges contain no metallic appearance. If there is any suspicion, repeat trituration with the same juice and burn again.

Dose: · 1 grain in butter p.d.

Gleet, Gonorrhea (chronic), stricture, urethra and Vatha rogas, like Myalgia, neuralgia.

19. **Zinc** (Nagam) **Basma.**

Take purified Zinc (by melting and pouring into the oil of the seeds of Bassia Latifolia, seven times) 3 tolas.

Melt in an Iron frying pan and while the pan is red hot, sprinkle over the melted zinc, a handful of the entire plant of Aerna Lanata(fresh) cut into small pieces-and be over turing the metal with a bundle of sticks of the same plant, and blow the bellows speedily until the contents of the pan burn well. By such a sort of combustion, the zinc will turn into flowers. Collect the flowers, leaving the unburnt metals. Powder and use.

Dose:—2 grains in Ghee b.d.

Gonorrhea, urethritis, and Piles.

In the same way, instead of the plant of Aerna Lanata, 3 tolas each of nitre and the tender leaves of Achyranthes Aspera triturated together and gradually sprinkle over the molten Zinc and reduce by combustion.

This may be given in the same doses for Internal piles and its complications like bleeding, inflamations Diarrhoea, watery oozings in the anus, pus discharges.

20. Naga Rasa (Zinc and mercury) Barma.

Corrected zinc 3 tolas. Melt in an Iron frying pan by placing over the furnace of the smith, sprinkle over it a handful of the entire plant of Phyllanthus Niruri, cut into small pieces, and be turning up and down (don't triturate). Zinc will be reduced into flowers by combustion.

Select the flowers, completely burnt add equal parts of purified mercury and triturate for 10 hours with the juice of the tender shooting stems of the Palmyra palm by warming the stems over the fire, make Lozenges, dry: enclose and seal in clay pan dishes, burn with 15 cowdung cakes. Powder and preserve.

Dose:— 2 grains in ghee or cutter.

For Piles, Fistulas, Gonorrhea, Cancers.

21. Naga Rasa—II.

Corrected zinc	3 tolas.
,, mercury	1½ tolas.

Melt the zinc and before cooling hard, pour the mercury. Thus an amalgam will be formed. Powder and sprinkle over an Iron frying pan burnt red hot in the smith's furnace, the powders will be reduced to flowers. Collect and triturate with the juice of the leaves of Abutilo Indicum or of phyllanthus Niruri for 5 hours, dry, enclose in clay pans, seal and burn with 15 cowdung cakes.

Dose:— 2 grains b. d. in butter or ghee.

Piles, Fistula and Gonorrhea, and their complications.

22. Silajit Basma Karpoora silajit.

(Foliated crystallized Gypsum-in Tamil Lexicon).

(Corrected by Dolayantra process in any of the following, Lemon fruit juice, liquor calcis, or cow's milk)

Take 3 tolas of the purified product and apply over the mass, a paste made of the fresh leaves of Phyllanthus Niruri or Achyranthes Aspera to a thickness of about half an inch all round, enclose in a linen with the pastes of chunam (quicklime) and burn with 10 cow dung cakes.

Dose:- 5 to 15 grains in butter.

23. Silajit—II

When large quantities are to be prepared, say about a viss (120 tolas) keep the masses soaked in cow's milk for 6 hours and wash with water. Take a thick rough linen, coat it with the paste of quick lime on both sides, place over it 3 tolas of sulphur, over which the silajit pieces, and another 3 tolas of sulphur over the masses, fold the cloth, tie round, apply chunam paste over the cloth allow it to dry. Burn with 200 cowdung cakes cool and powder.

Use in same doses for the above diseases in butter.

24. Silajit Nitre and Borax Basma.

Silajit	3 tolas.
Nitre	3 tolas.
Borax	6 tolas.

Triturate with Liquor calcis make lozenges, seal in clay pan crucibles, dry and burn with 60 cowdung cakes.

Dose: 5 to 15 grains b. d. in butter or decoction of cumin seeds.

25. Tin (Vel Vangam Tamil).

Corrected Tin	3 tolas.

(Tin and lead purify as follows: melt and pour in the oil of the seeds of Bassia Latifolia 7 times)

Draw into thin plates to a thickness of the Tamarind leaf and cut into small pieces with scissors of the size of a horse gram, mix with 24 tolas of Pepper, bruised coarsely and spread it over a rough linen 1′ x ½′ to a thickness of the linen itself. If there is surplus, spread over this powder, another of the same size and spread the remaining, roll like a rod or ruler, and tie the ends and the middle parts with a twine in 4 or 5 places, and set fire to the two ends. Keep this in a corner of the building where there is no breeze. The next day the whole thing will be found burnt and cooled. Remove the burnt linen and collect the ashes. Separate the ashes and collect the burnt tin flowers. Powder and store.

Dose:— 1½ to 3 grains with ghee and Silajit Basma. In Gonorrhea, Gleet, urethritis and skin diseases.

Tin may be reduced into flowers, also by packing with the following:—

Equal parts of Turmeric and the oil cakes of the seeds of Bassia Latifolia, powdered coarsely.

Or Mullago carviana plants powdered similarly.

26. **Lead Basma.** (Karu Vangam---Tamil.)

Purify as for Tin.

Take 3 tolas and melt in an Iron frying pan While the pan is red hot, sprinkle 3 tolas of the powder of Bisulphuret of Arsenic (Realgar of Red orpiment---called manosilai in Tamil) gradually and rub with an Iron ladle or spoon. Place this over a stone mortar with 3 tolas of Silajit (boiled in cow's milk already) and triturate with the juice of Lemon fruits for 10 hours-- Lozenges--dry-- enclose in clay pan crucibles-- Seal and burn with 15 cow dung cakes. Repeat trituration with Lemon juice and burning 3 times. Powder.

Dose:--- ¼ to ½ grain in honey or Ghee b.d. from 3 to 5 days.

Gonorrhea, Leucorrhea, Buboes, Skin diseases, Syphilitic ulcers or eruptions in all stages, Diabetes mallitus and Insipidus, and Leprosy.

Avoid---fish, Sheep, Oils, Tamarind.

27. Lead Basma—II.

May also be prepared as follows:—

Melt and pour in the juice squeezed cut of Vitis Quadrangularis and Cow's urine bruised together 7 times, and in gingelly oil 7 times. Finally melt in an Iron frying pan, 6 tolas of this lead, while the pan is red hot, sprinkle powdered nitre and rub with an Iron ladie until the lead is found amalgamated with the Salt and freed from metallic lustre. This will take about 7½ hours.

Triturate with the juice of the Aloes Indica (pulp juice or root juice) for 10 hours. Lozenges—dry—pack in pans—burn with 25 cow dung cakes. Repeat with 50 cow dung cakes and again with 75 cakes.—after triturating them with the same juice every time.

Dose:— ½ to 1 grain b.d. in honey or ghee in similar diseases as before.

28. Conch Basma. (Sangu Basma Tamil)

3 tolas of conch shell to be broken into small pieces and steeped in cow's ghee for 2 days. Enclose them in a paste made of the leaves of Gynandropsis Pentaphylla of the size of a tennis ball and cover with the same all

over the ball. Roll over it 4 layers of clay cloth dry and burn with 50 cowdung cakes.

or

Steep in a solution made of Tamarind fruits and water, 3 tolas of broken shells; for a night, wash, and enclose in clay pan crucibles seal and burn with 30 cowdung cakes, powder.

Dose:— 2 to 8 grains in honey or Lemon juice b.d..

In colic, indigestion, anorexia, Acidity of the stomach.

29. Tortoise Shell Basma.

Enclose broken pieces of Tortoise shells in a pasts made of the fresh cyperus Pertencusis (fresh and green) as a ball and burn with 30 to 50 cowdung cakes.

Dose: ½ to 3 grains in honey or ghee.

Indigestion and anorexia.

30. Cinnabar Sinduram (Linga Senduram.)

Purified cinnabar 3 tolas (in a mass) (Purification,) Keep it steeped in mothers milk and honey, one day in each, place this mass in a clay pan over the hearth, and instil the following solution in drops for 3 hours so

that the solution may be obsorbed by the heat underneath.

Place the cinnabar in a clay pan over the fire, and instil the juice squeezed by bruising the tender berries of Margosa, for 10 hours, until the juice is absorbed by the heat. Allow the crusts to remain on for a couple of days.

Take a mud pot and fill in it ¾ seer of the dried seeds of margosa, place the prepared cinnabar over it, and fill up with another ¾ seer of the seeds. Place the pot over the hearth and burn until the seads inside the pot burn by combustion. Set asid for a day remove the cinnabar, next day, and triturate well in a mortar and preserve in bottle.

Dose: ½ to 2 grain in honey a day.

For all kinds of Fevers.

31. Cinnabar Basma—II.

Triturate 3 tolas of Cinnabar with half a seer of the milk of calatropis Gigantea for 3 days continuously–lozenges–dry, enclcse in clay pans, seal, dry, place it, in a pot containing sand, cover with more sand, burn over a hearth, gradully increasing the heat, until the sand,

becomes red hot, cool and collect the lozenges, powder.

Dose:— ½ to 2 grains b.d.

A specific for fevers of all kinds, convulsions, sannipatha. Rhumatism, myalgia.

32. Cinnabar Sinduram.

Take a clean iron spoon and put in it 1½ tolas of powdered sulphur and place a mass of purified cinnabar weighing 3 tolas and cover the mass with another 1½ tolas of sulphur powder. Place the spoon over fire; while the sulphur begins to melt instil ½ pint of Ass's milk in small quantities for 12 hours. Cool and wash off the crusts, powder and store.

33. Cinnabar.

Take a dozen fruits of Aegle marmelos, remove the shells, dry the pulp until the water is slightly dried up, and collect to the size of a cocoanut. Insert into this, 3 tolas of cinnabar purified, in a mass, roll over this 7 layers of clay cloth and burn with 30 cakes of cowdung. Set aside for a day. Remove the cinnabar on the next day, clean, and powder.

Dose: — ½ to 1 grain in honey or fresh ginger juice (boiled) b.d.

A specific in Fevers caused by Pitha.

34. Abraha Basma.

For this, the white variety, that appears like glass, should be used.

Take 6 tolas of the above, cut them into small pieces, soak them in a pot containing young boy's (below 8 years) urine and quick lime (chunam) mixed together, set aside for 3 days and wash with water.

Take 15 tolas of powdered Borax, and spread some in a small mud pot, place over it some pieces of mica, and fill up the two drugs alternately one over the other in layers, and press them down to the pot. Place a cover lid of mud pan to the mouth of the pot. Seal with clay cloth, dry, burn with 200 cowdung cakes. Cool and collect the charred mica. Triturate with Lemon fruit juice for 3 days consequtively, prepare lozenges, dry, enclose in clay pan crucibles, seal and burn with 40 cowdung cakes. Repeat this process 3 or 4 times until the lozenges assume white colour.

Dose: 1 to 3 grains.

35. Abraha Sinduram.

For this, Krishna Abraha, (black variety) should be used.

Take about 3 or 4 lbs., of the above. Hold the pieces with a pair of forceps, heat (red hot) and dip once in a mixture of equal parts of urine of the cows and Goats, and pound them in a big stone mortar with crow bar (iron pestle) mix with equal quantity of paddy (grains), add water and boil. Place them in a rough cloth, fold into a bag, immerse in a basin containing fermented rice water (Kadi), and rub the bag with the two palms so that the molecules of mica (very fine ones) drop in the fermented water. Set aside for a day, decant the water, and collect the fine mica. This is called 'Abraka navaneetham' (Lit. Butter of Mica)

Take 30 tolas of this, triturate with the juice of the bulbous roots of Raphanus Sativus for 10 hours, make lozenges, dry, enclose in clay pans, seal, and burn with 1000 cowdung cakes, repeat trituration with the same juice 10 times and burn similarly every time, and also with the following 10 times in each,

(1) A decoction made of equal parts of the barks of Banyan tree, Ficus Religiosa, Ficus Glamorata and Eugenia Jambolana (jambul) boiled with 16 times of its weight of water and reduced to ¼ part.

(2) A decoction made in a similar manner of the root barks of Plumbago Zeylanica.

(3) Juice of Lemon fruits.

(4) „ Trichodesma Indicum plant.

(5) „ Ocimum Basilicum „

(6) „ Siru cheruppadai (tamil) „

(7) „ Potralai Karippan (tamil) slightly yellow coloured eclipta erecta.

(8) „ Flowers of Butea Frondosa.

(9) „ Pomegranate fruits (Kummatti madulai.)

(10) „ Pomegranate fruits, sour variety.

Powder and store.

Dose:- - 1 to 3 grains.

Administer in suitable vehicles, like honey, milk, choornams, pills, dococtions or confections in the following diseases.

Pulmonary Pthisis, Mega rogas, Urethritis, Leucorrhea, Gonorrhea, Mega Vayu, Sprue, Janni, Chronic fevers, Dryness of the body, Peripheral neuritis, Gleet, and emacia-

tion of the body due to any unknown cause. Improves the tone of the seven kinds of tissues of the body.

36. **Annabedi Sinduram.** (Ferri sulphas)

Ferri Sulphas 3 tolas.

(a) Steep in fermented Rice water for a day and triturate with the juice of 5 lemon fruits, make lozenges, dry, enclose in clay pan crucibles, seal, and burn with 10 cowdung cakes.

or

(b) Triturate with the juice of the leaves of Euphorbia Nerifolia (maan - sevi - kalli - Tamil) lozenges, dry, and burn as before.

Dose:-- ½ to 2 grains in honey.

Anaemia, chlorosis, dysentry, diarrhoea, sprue.

37. **Paranda Basma.**

Skull bones of the dogs, ox, and human beings equal parts (say each 3 tolas.)

Powder and triturate with ass's milk for 12 hours continuously, make lozenges of the size of a rupee coin, dry, enclose in clay pan crucibles, seal and burn with 30 cowdung cakes. Triturate into powder.

Dose:— 5 to 15 grains twice a day, for 6 days with:—

Ass's milk; Fresh ginger juice; and White sugar; Each 1 Teaspoon.

In all kinds of mental disorders, such as Melancholia, Hypochondria or any violent forms of insanity.

38. **Thalaga Basma.** (Pulipani)

(a) Purify Haritala (Yellow orpiment) by placing a mass of it rolled in a linen, in a heap of quicklime stones and smearing over it ass's urine or boiling water. Repeat this process from 10 to 100 times as far as possible, change the stones every time with fresh ones.

Take a single mass of corrected orpiment weighing 3 tolas, and apply over it a paste made of equal parts of the leaves of Acalypha Indica and Quicklime triturate together finely, to ½ an inch in thickness all round the mass. Over this, roll clay cloth, seven rounds tightly. Allow it to dry for sometime until the layer of clay is dried up. Burn with 30 cowdung cakes. Cool and powder.

(b) Corrected orpiment 3 tolas (one mass.)

Triturate Terminalia Chebula (removed of seeds) for 6 hours with water into a paste. Apply this paste to ½" thickness over the orpiment mass. Roll over it clay cloth tightly all round. Place it in an egg shaped mud crucible, cover the lid with a piece of clay slab, seal with clay cloth. Dry and burn with a couple of cowdung cakes.

(c) Corrected orpiment 3 tolas (one mass)
Purify as follows:—

Take a mud pot, place in it ¼ seer of chunam stones (Quicklime), place on this the mass of orpiment and cover this with ¼ seer more of Quicklime. Sprinkle over the stones 1 seer of toddy drawn from Palmyra Palm, cover the lid of the pot with a sauce pan and set aside for 24 hours. Remove the orpiment, wash with water and again repeat the above process a second time. Wash the orpiment and place it over the hearth, and apply heat. While the hearth is burning, instil over the mass of orpiment, the following solution, in small quantities, for 3 hours, allowing the solution to be dried with mass. Take the mass out of the hearth and triturate with fresh solution of the same, for 3 hours, into a pill mass.

Before triturating the orpiment with the solution, get ready, a pair of clay pan crucible, say, about 4″ in diameter, and coat the inside with quicklime solution 6 or 7 coatings and dry them up in the sun. Spread the pill mass into one of these pans, and keep it under the sun till it is dried up.

Cover the lid pan, seal with clay cloth and burn with 7 or 8 cowdung cakes. Repeat this process 3 times. The solution referred above is called Puli-vediuppu Jeya Nir. (Tamarind and Nitre-vinegar.) Take 30 tolas each of old tamarind fruit pulp (freed from seeds and fibres). Triturate together into a pill mass and spread it on a big clay sauce pan. Place this pan over a hearth and set fire to the hearth. The preparation will burn and reduce into ashes. Collect these ashes, place it in a procelain cup and place the cup in the night dew. The ashes will be found watery. If it is not the dew season, take 2 seers of Quicklime and dissolve in water to a syrupy constituency, pour it in a wide mouthed vessal of clay or copper, place the porcelain cup into this solution by arranging 3 small stones to the bottom of the cups, and cover the whole with another big vessal so that air may not

enter the ingredients. In this manner also the ashes will be converted into water. Collect the supernatant fluid for the above purpose.

(d) Take the bulbous root of a plaintain tree, cut a hole in the centre to hold a piece of Thalagam weighing 3 tolas, and place the mass in the hole and cork with the cut piece of the root. Enclose with clay cloth and burn with 500 cowdung cakes, cool and collect the mass.

Dose:— ½ to 2 grains b. d. in honey and long pepper powder.

For all kinds of fever, Pulmonary Pthisis, Asthma, Chronic Bronchitis, Influenza.

39. Reduced Magnet.

Take 12 tolas of purified magnet and 12 tolas of finely powdered dried root of bark of Cassia Auriculata, place them in a mortar and triturate with the juice drawn from Aloe for 10 minutes and make into lozenges, dry, and place them in a flat bottomed clay pot, cover with a suitable lid of clay, pack the lids with clay and cloth and put over a hearth and set fire. Gradually increase the fire, for 10 hours and keep the pot aloof until cooled.

Then remove the lozenges and powder finely and preserve.

Dose:— ½ to 3 grains in honey or ghee.

Especially useful for Sprue. A general Tonic, as Iron.

40. **Reduced Iron and Magnet.**

Corrected Magnet	6	tolas.
„ Iron filings	6	„

Place them in mortar and triturate with mothers milk for 10 hours and make lozenges of the size of a half an anna piece. Dry, pack them in flat clay crucibles, dry and burn with 50 cowdung cakes. Repeat the process by triturating with the juice of Eclippa Drecta Naarum and Karandai (Tamil) once in each.

Dose:— 1 to 3 grains, in honey.

Used in Jaundice, anaemia, Chlorosis, Chronic Diarrhoea, Sprue, Myalgia, and in fissure of the feet, which is supposed to be caused by Pitha dosha.

(Another process:— *Iron and magnet.*)

Purified magnet	6	tolas,
„ Iron filings	6	„

Triturate in a mortar for 7½ hours with the juice of aloe petal make lozenges,

dry. Pack in crucibles. Burn with 20 cow dung cakes Repeat process 7 times.

Useful in the same diseases as above, in the same doses

41. Borax Karpoor Silajit, Hart's Horn and Kalnar Basma Compound.

Powders of the above in equal parts (3 tolas each),

Take enough of the roots of Gossypium (Indian cotton root) and burn them into ashes. Collect 1 seer of the ashes, dissolve it in 24 seers of water. Set aside for 3 days in a closed pot. Decant the supernatant clear liquid on the 4th day.

Triturate the above powders with this water into a pill mass for 12 hours and prepare lozenges, dry them under the sun, enclose in clay pan crucible and seal the edges with clay cloth, dry and burn in a heap of cowdung cakes (1½' x 1½' x 1½'). Cool and collect the lozenges.

Transfer them to a mortar, adding one pie weight of each of the following ingredients:-

Ammonium chloride, Camphor, Hydrargyri Perchloride, and Sodium Carbonate.

Again triturate with the above water for 12 hours, prepare lozenges, dry under the sun.

Place the lozenges in mud pan crucible, containing slacked lime, cover the lozenges with more of the same lime, place the lid pan, seal as before and burn with cowdung cakes, (1½' x 1½' x 1½')

Cool and collect the lozenges.

Triturate again with the white yolk of hen's eggs, make lozenges, enclose in clay pan crucibles without lime, and burn as before. Cool and collect.

Weigh the lozenges and add one half of its weight, of cinnabar (purified) triturate well and preserve in bottle.

Dose:— 5 to 15 grains twice a day in tender cocoanut water.

Ascites. Dropsy, Urethritis, Gravel or stone in the bladder or Urethra, Stricture Urethra, Retention of urine.

42. **Coral Basma--I.**

Steep 3 tolas of the broken pieces of coral in Lemon fruit juice for 24 hours, wash and collect them.

Take equal quantity of (3 tolas) Karpoor Silajit and triturate with the juice of Vitis Quadrangularis along with the above coral,for 12 hours into a pill mass, make lozenges, dry pack in clay pan crucible, seal, burn with cow dung cakes arranged to 1½' x 1½' x 1½'. Repeat this a second time. For the third time--triturate with the juice of Oxalis Corniculata, for 5 hours, make lozenges, dry, pack in crucible and burn as before. Cool and powder.

Dose:-- 5 to 15 grains b. d.

In cow's butter, for all kinds of Mega Roga Rickets, emaciation of the body, due to any causes, Diabetes mellitus, all kinds of skin diseases, ulcers and diseases caused by the increase or decrease of Vatha.

43. **Coral-- II.**

Place in a crucible (used by Goldsmiths), 3 tolas of Coral and sprinkle over it 1½ tolas of purified white arsenic, cover the crucible, with a suitable plate of copper corresponding to the rim of the crucible, and over it with a clay pan. Seal with clay cloth and burn with 15 cowdung cakes Cool and collect the contents.

Triturate with the milk of calatropis gigantea (white flowered variety) make lozenges dry, enclose in a clay pan, burn with 10 cow dung cakes. Cool and powder.

Dose:— ½ to 1 grain in honey.

A specific in Sannipatha, especially in puerperal sepsis.

44. Coral—III.

Wash 3 tolas of coral in water after steeping in it for one day.

Make a paste of the leaves of Tiaridium Indicum, place the coral in the middle of this, enclose in 7 layers of clay cloth, dry this under the sun, burn with 50 cowdung cakes. Cool and collect the coral and steep in a cup of cow's milk, dry under the sun. Pack this coral in the ripe (yellow colcured) leaves of the Banyan tree and set aside under a heap of Paddy or granery of paddy for 3 days. Powder and use.

Dose:— 5 to 10 grains b. d.

Pulmonary Pthisis, Asthma, Chronic Bronchitis, Eczema, and other kinds of skin diseases.

45. Coral--IV.

Steep 3 tolas of Coral in lemon juice for 3 days wash with water and enclose in a paste made of the leaves of Zizyphus Jujuba, enclose with 7 layers of clay cloth, dry, and burn with 50 cowdung cakes. Cool and collect the ashes and steep in cow's milk and dry under the sun.

Dose:- 3 to 10 grains in Ghee or honey, actions as No. 3.

46. Coral--V.

Take a mud pot, fill half of it with the fine shootings of red coral (sold in bazaar at 3 pies per tola) fill up with the juice of cephalandra Indica (Coccinea Indica) leaves, cover with a lid, seal and burn with 100 to 200 cow dung cakes according to the quantity of coral used (4 to 8 seers) Cool and powder,

Dose: -- 3 to 5 grains b. d. in honey and long pepper water.

Used in diseases as No 3 and 4.

A cheap and efficient preparation, useful for charitable dispensaries.

47. Coral--VI. (Compound)

Take 3 tolas of orpiment and immerse in a clay pot containing common salt by

placing the pot over the hearth of the Black-smith, and blow until the pot becomes red hot and mutilated by melting. Cool and collect the orpiment which will be found melted and brown.

Add to this equal quantities of coral and Karpoor Silajit, Triturate with the milk of Calatropis Gigantea (white flower) for 10 hours make lozenges, dry, enclose and seal in clay pans Place this pan in a big pot containing sand, cover and seal the lid with a clay pan. Place over the hearth and slowly burn for 10 hours. Cool and powder.

Dose:— ½ grain b. d.

Along with suitable anupan (choornams or lakyams) for Asthma and other diseases of the respiratory system.

48. Coral—VII.

Take Solanum Xanthocarp berries—the variety that possess blue flowers (2 lbs.) Bruise and spread half of them in a clay pan crucible, place over it 24 tolas of purified coral and spread upon it the remaining bruised berries. Place the cover lid pan, seal, and burn with 200 cowdung cakes.

Dose:— ½ to 2 grains in cow's ghee b.d.

Nasal catarrh, Pharyugitis, Bronchitis, Asthma and Pulmonary Pthisis.

49. Coral—VIII.

Steep coral in cold water for 1 day (24 hours) wash well. Again steep in cow's milk for 1 day, spread over clay pan bruised berries of Tiaridium Indicum, place the coral over the bruised berries scattered, and spread more of the berries as to cover up the coral. Place a cover lid pan, seal and burn in Gajapudam. Cool and collect the coral in a china cup, pour sufficient quantity of cow's milk as to soak the coral and place it under the sun until the milk is dried up. Triturate the coral into fine powder, transfer to a bottle and place the bottle in a heap of paddy for 4 days, and now the basma is fit for use.

Dose: — 1 to 3 grains in honey or other vehicles suitable in the following diseases.

Asthma, and 96 kinds of skin diseases.

50. Vediuppu Sunnam.

Take powdered Tortoise shell 15 tolas, spread half of it in a clay pan and place over it 3 or 4 sticks of Nitre weighing together 3

tolas, fill up with the powder, cover with another suitable pan, seal, dry, and burn with 15 cowdung cakes. Cool and collect the pieces of Nitre which will appear like marble powder.

Dose:— 2 grains in tender cocoanut water twice a day.

Retention of Urine, Gravel or stone in the Urethra or bladder and urethritis.

51. **Hart's Horn Basma—I.**

(a)	Hart's Horn	1 Tola
(b)	Nitre	1 ,,
(c)	Ajwan Seeds	1 ,,

Triturate (b) and (c) with water into a paste and apply to (a), and dry, Roll a layer of clay cloth over it and dry. After drying, place this between a heap of charcoal (about 2 lbs.) Set fire to charcoal heap and be fanning. Cool and remove the hart's horn. Powder and store in bottle.

Dose:— 5 to 15 grains b. d. in honey.

A stimulating expectorant. When any drugs are administered for fevers with chillness in the extremities, this Basma may be used as a reliable vehicle.

52. Hart's Horn--II.

Break the hart's horn into pieces of 2 or 3 inches in length, scrape off the marrow thoroughly, Apply a paste of Acalypha Indica leaves over the pieces. dry, and arrange them between the cowdungs cakes of about 100 burn and Triturate with cow's milk, make lozenges, dry enclose in clay pans, seal, burn again with 100 cowdung cakes, cool, and powder.

Dose:— 2 to 8 grains b. d. in cow's ghee.

Fevers—Feelings of heat, thirst, urethritis.

53. Lavana Sinduram.

Black salt called Kalluppu or Gandaga. Uppu in tamil	12 tolas.
Mercury	3 „
Aegle mamelos Juice (Leaf)	q. s.

Triturate into a paste for 6 hours continuously until the mercury becomes invisible to the naked eyes. Transfer to a small mud pot. Place this pot over a black smith's furnace, with bellows, blow the fire until the pot turns red hot and appears as if the pot will

melt. Remove from the furnace and allow the pot to cool. The ingredients will be found melted and settled down.

Remove the melted ingredients and triturate with the juice of Pistia Stratiotes for 10 hours, divide into small lozenges of the size of a rupee (Indian coin) dry, enclose in mud pan crucible seal and submit to a pudam of cowdung cakes 1½' x 1½' x 1½'. Repeat this process 5 times. Powder.

Dose:— 5 to 15 grains twice a day in honey.

Gastritis, Gastralgia, Dyspepsia, acidity of the stomach, Gout and intestinal disorders.

54. **Panchalavana Basma.**

Rock salt, Vid salt, Common salt, Nitre and Black salt each 3 tolas.

Triturate with the following juice for 2½ hours in each, to a pill mass, prepare lozenges, dry, enclose in crucibles, seal, dry and burn with 20 cowdung cakes.

Aloe root juice, Uitex negundu, Vitis, Quadrangularis, Mortinga Petrogosperima bark, and Acalypha Indica leaves.

Dose:— 5 to 10 grains b. d. in butter milk or boiled rice preserved water.

Myalgia, Dysentery, orchitis, Indigestion, Diarrhoea, and ascites.

55. Alum and Cinnabar.

Place 30 tolas of powdered Alum in a broad clay pan over fire, melt and when the water is evaporated, a kind of frothy surface will be formed. At that time. make space in the middle of it with a knife, and put in it 3 tolas of finely powdered cinnabar and cover it with the alum froth from the sides, cover the pan with another pan, until all water evaporates and becomes dry. Scrape all from the pan, triturate well in a mortar until everything is completely mixed up. Store.

Dose:— 1 to 4 grains in ghee or honey.

In biliousness, Vomiting, sleeplessness, Diarrhoea, Dysentery, bilious fevers, etc.,

56. Veera Rasa.

Rasa Sindura (sold in bazar)	1 tola
Cinnabar	1 ,,
Perchloride of mercury	½ ,,
Silver nitrate	¼ ,,

Triturate in a mortar for half an hour, place under the bright sun for half an hour. Repeat this process 4 or 5 times and store,

Dose:— ½ grains in fresh ginger juice and the juice of the flowers of Leucus cephalotes, one teaspoon each.

Very efficacious in fevers with severe thirst, and excessive perspiration that lead to the coldness of extremities, also in fevers caused by sexual intercourse, and in cholera.

This should not be repeated more than twice.

57. Iron and Perchloride of mercury.

Triturate 3 tolas of fine Iron filings and 3 tolas of Perchloride of mercury with the juice of camphor-smelling-Betel leaves for 2 days, at 5 hours a day, make lozenges, dry and powder them. Place this powder in a small clay pot of the size of a wood apple, with narrow mouth, and close the mouth with a flat slate slab, and seal the edges with clay cloth and dry.

Place in another clay pot (to hold 1½ measures of sand) one inch height of dry sand and put in it the above sealed pot, fill up to

the brim with more sand. Put this pot over fire and burn with fire wood for 10 hours, regulating the heat, gradually increasing it. Allow it to cool. Scrap off the medicine, powder finely and preserve.

Dose:— ½ to 1 grain in honey.

In all sorts of painful affection of muscles and joints, chronic fevers, sannipatha variety of fevers.

Diet:— Soogee or Rice Conjee.

58. **Pancharatnam.**

Iron filing	1 tola
Magnet	1 ,,
Orpiment	1 ,,
Mercury	1 ,,
Gold leaf	1 ,,

Triturate gold leaf with mercury until they mix together, and add other ingredients and triturate well with the juice of the roots of Aloes, for 10 hours, and make into one lozenge. Dry, pack and seal in a pair of clay pan. Burn with 25 cowdung cakes. Cool again, triturate with the juice of the leaves of Acalypha Indica. Pack and burn as before. Repeat this process 5 times; triturating alternately, with the above juices, and cool, powder and store.

Dose:-- ½ to 3 grains in honey or ghee.

A very valuable preparation in Asthma, Chronic Bronchitis, and Pnemonary Pthisis and a powerful tonic.

Diet:— Nutritious food to be taken,

59. Arumuga Sinduram.

Fine iron filings	24 tolas
magnet	12 „
Perchloride of mercury, sub-chloride of mercury, cinnabar, sulphur.	1 drachm each.

Triturate well in a stone mortar for 30 hours with liquor calcis, Lozenges, dry, pack in clay pan crucibles, seal with clay cloth and burn with 30 cow dung cakes.

Triturate with the following juices and burn twice in each variety.

1. Unripe tamarind fruit juice
2. Lemon Juice
3. Sour pomegranate fruit juice.

Finely powder and store.

Dose:-- ½ to 2 grains in honey or ghee twice a day.

Very efficacious in pernicious anaemia, chlorosis, Gastritis, Gastralgia, Chronic fevers,

Enlargement of spleen, Rheumatic fever, arthritis, ascites etc.,

60. **Kasturi Karuppu.**

1 Pacha Karpoora; 2. Saffron; 3. Bezoa (Ghorochan); 4. Cinnabar (purified); 5. Crude calomel (purified) 6. Sulpher (purified) 7. Orpiment yellow (purified) 8. Mercury (purified) 9. Rasa sindura (purified), 10. Long pepper; 11. Ajowan; 12. Orpiment Red (purified); each 1 tola. Musk 1/8 tola.

Triturate mercury and sulphur well and then add one by one and lastly the musk after everything is completely mixed up. Store in tightly corked bottle.

Dose:— 2 to 10 grains in honey.

In all kinds of fevers, pains, weakness, of the heart due to any kind of disease. In intense thirst in fevers, restlessness, delirium, insomnia, Facial Paralysis, Hemiplegia, Myalgia, Rheumatic fevers, Migraine.

61. **Jalamanjari.**

1. Couch shell powder; 2. Sagastrabedi; 3. Magnet; 4. Silajit (Karpoor); 5. Kalnar; 6. Borax; 7. Iron filings; 8. Sulphur; 9. Alum; each $\frac{1}{2}$ tola. Nitre $4\frac{1}{2}$ tolas.

Triturate together well, and place in a cup shaped crucible, and melt over charcoal fire, and allow it to cool by pouring over a clay pan. Powder well and preserve.

Dose:— 3 to 6 grains.

Very efficacious, Diuretic, Tonic, in Dropsy due to heart, liver or kidneys, and extreme anaemic conditions like Pernicious anaemia or chlorosis

To be given in cocoanut water, lemon juice, hot water, or decoction of Eclipta Erecta, as the case require.

62. **Megachintamani Sinduram.**

1. Magnet; 2. Coral; 3. Gold leaf; 4. Sulphur; (each 2 parts).

1. Reduced mica; 2. Mercury; (each 5 parts).

Triturate in a stone mortar gold leaf and mercury together until the mercury completely disappears and then add sulphur and triturate well until everything becomes black, and then add other ingredients one by one and triturate well with the root juice of Aloes for 10 hours and dry with the mortar itself.

Take a flask (Kaasi Kuppi) cover it with 7 layers of clay and dry. Place in it the powder, pack the mouth with a piece of soft slate stone and seal with clay cloth and dry.

Take a clay pot to hold(2 or 3 measures of water) fill ¼ of it with fine sand, place in the centre the prepared flask and fill up on all sides with more sand upto the brim of the flask. Place the clay pot over hearth and burn with fire wood for 10 hours, first low fire and gradually increase the fire. Remove the flask after it is cooled, break the glass flask and carefully scrape of the contents, place in a mortar and triturate with aloe root juice again for 10 hours, make into lozenges, dry, and pack in clay pan crucibles, and seal with clay cloth and burn with 10 or 12 cow dung cakes, if the quantity of the preparation is below 2 or 3 tolas, or increase the cakes if it is more. Cool and see if the lozenges show any glittering of Gold, if it is so, repeat trituration with above root juice, and burn with cow dung cakes until the glittering disappears which will be alright in 2 or 3 burnings.

Dose: 1 to 2 grains in ghee or butter twice a day.

An excellent preparation for diabetes and rebuilds the 7 tissues of the body.

63. **Balasanjivi Sinduram.**

1. Rasa Sinduram; 2. Cinnabar; 3. Crude calomel; 4. Purified croton seeds; each ¾ tolas.

Triturate well in a stone mortar, add 6 tolas of the fresh leaves of azima tetracanttra, to a pill mass, make a single lozenge, dry, put in a clay pan, fry over charcoal fire, without allowing it to fume by roasting one side after another by frequent turning, until it assumes the colour of brick red, cool, powder and store.

Dose:— ½ to 2 grains for children, 3 to 6 grains for adults in honey.

In bronchitis, fevers, asthma, Myaliga Infantile convulsions due to indigestion or fever.

2. Mathrais. (Pills)

1. Sanjeevi Mathrai.

(a) Rasam, Thalagam, Gandagam, Vengaram, Nabhi, Nirvisham, each 3 Kazhanju.

(b) Sukku, Milagu, Thippili, Kadukai, Nellikai, Thanikai, each ½ palam.

(c) Valaparuppu 3¼ Palams.

Purify the ingredients (a) and (c) as per directions for purification. Finely powder the ingredients (b) and pass through a fine sieve. Weigh the ingredients separately as above. First triturate Rasam and Gandagam together and add the rest one by one.

Triturate all the ingredients together with juices of Nochi, Murunkan, Kuppameni, Kaian, and Adathodai for 24 hours in each, continuously adding sufficient quantity of the juices. Make into a pill mass. Prepare pills of the size of a pepper.

Dose:— 1 to 3 pills.

For, Migraine with cow's milk, internally; Eczema and other skin diseases of the scalp—mix one or two pills with the Juice of Acalypha Indica and apply, externally: All

kinds of skin diseases—with the Juice of Cherupadai, externally; Leprotic ulcers of the Scalp—with the juice of Daemia extensa, externally; Hemicrania with the juice of the fruits of bitter orange (Narathai), externally; Cataract with the juice Dacalypha Indica, to be dropped into the eyes; Hazy vision—with the juice of Clitoria Ternatia; Opacity of the cornea--with mother's milk; Blepharitis—with the juice of the leaves of Butea frondosa; Vayu- with the juice of Betal leaves, internally; Kapha--with the powder of Horse gram; Diarrhoea—with the juice of the bark of Ficus. Glamorata; Janni—with the juice of Vitex Negundu; Grahani—with the Buffalo's butter; Chronic Dyspepsia—with the urine of the Buffalo; Gastritis—with the juice of the leaves or bark of Crataeva Religiosa; Constipation—with Pepper powder; Enlargements of the liver or spleen—with the juice of Cassia Tora; Otorrhea and otitismedia drop into the Ears with the juice of Embelica officinalis; Orchitis, internally, with the juice of Cardiospermum Halicacabum; Arthritis—with the juice of Boerhavia Diffusa; Snake bites with the juice of Momordica Charantia leaves; Vath Fever—

with Vitex Negundu leaves juice; Venomous bites, Coma, Collapse and other unconscious state the pill to be rubbed with the betal leaf juice and instilled or blown into the nostrils.

2. **Mantha Mathrai** (for children).

Sukku, Milagu, Thippili, Amaiodu, Omam, Kadugurogini, Vaivilangam, Perungayam, Inthuppu, Neervalam (Purified) equal parts.

Tortoise shell to be kept immersed in the juice of Daemia Extensa for 24 hours and powdered before adding to the preparation.

Triturate the whole with pure water and prepare pills of the size of abrus Precatorius seeds.

Dose: - 1 to 1½ Pills for children.

To be administered in the juices of Agati Grandiflora, Erythruia Indica, ginger, etc., for intestinal disorders due to constipation; and fevers due to indigestion with constipation. Once or twice a day.

For adults in similar conditions 3 or 4 Pills per diem.

3. Maha Kodasoori Mathrai.

(a) Thalagam, Gowri, Sembuthotti, Vengaram, Veeram, Lingam, Thurusu, Manosilai, Vellaipashanam, Rasam, Vaalam, Paltutham, Gandhagam, Padikaram, Annabedhi, (all purified) 1¼ Viraganidai.

(b) Thirikadugu, Jadhipatri, Manjishti, Lavangam, Kurasani Omam, Devatharam, Chithramoola (Ver pattai) Kadukai, Nellikai, Thanikai, Koshtam, Siru Nagappo, Vasuvasi, Kadugurogini, Valamburikai, Jathikai, Ganja-Ver (Root cf Cannabis Indica). Fry these ingredients until they all become slightly brown each 1¼ Viragan.

(c) Pachakarpooram, Induppu, Pooneer (impure Sodium Carbonate) Perungayam, Sandana thool (Saw dust of Sandal wood), Pereechankai, Dhraksha, Vellai Poondu, each, 1¼ Viragan.

Triturate a, b, c. together with the Juices of Eclipta erecta (Karisalanganni) Vitex Negundu, and Evolvulus alsoinoides, for 7 days in each continuously, and prepare pills of the size of green gram.

Dose: — 1 to 2 Pills.

For, gleet—in the decoction of the roots of Cynodon Dactyolon; Suga-Janni—in boiled juice of fresh ginger. Thirst—in sugar; Hectic fever in butter milk; intermittent fevers—in the decoction of cardiospermum Halicacabum; for Orchitis, Jaundice, anaemia, and billious affections—in the decoction of Tri-pala, or Cow's urine; for Internal piles—in sugar; as antidote for poisoning—in black Datura Juice; for 84 kinds of vatha diseases—in the juice of Crataeva Religiosa; for 84 kinds of Gunma rogas, such as Dyspepsia, Gastralgia gastritis, and vipruthi, (Multiple abscesses), asthma, ascites, dropsy, inflamations of the liver, spleen, Uterus or ovaries, and for 96 kinds of Kapha rogas (Respiratory), in the Juice of Colocynth fruit.

For ulcers, scrofula, carbuncles, and Syphilitic ulcers, one pill to be mixed with a teaspoon of butter and applied on. For venomous stings and bites, make a paste with lemon juice and apply on the part.

4. Gorochana Mathrai.

Gorochanam, Kungumapoo, Pachai-karpooram, Rasa sinduram, Rasa Karpooram, Elam, Abraha Sinduram or Baspam, Lavangam,

Koshtam, Jadhikai, Akrakaram, and Sambrani Pathangaın, equal parts. Musk $\frac{1}{8}$ part.

Triturate, well in the decoctions of Sandal wood, Chambaga flowers, and Saffron, each separately for 5 hours in each and prepare pills of the size of an abrus precatorius bean.

Dose:-- 1 to 2 pills.

For Pharyngitis, laryngitis, Tonsillitis, Pneumomia, and all kinds of respiratory diseases, attended with fever or not, in honey, ginger juice, the juice of adathoda Vasika leaves, solanum jacquini leaves, solanum tribolatum, ocimum sanctum, Garlic and Alpina Chinensis, baked in steam or juice squeezed by bruising.

For 13 kinds of Janni, Hemicrania, neuralgia, convulsions, fainting, collapse, shock syncope, tetanus, and all kinds of fevers in children-- to be administered in nim oil, garlic oil,egg oil, or in Decoctions containing chiretta, tinospora cordifolia etc.

In Gastro-Enteritis in children-- with mother's milk or honey.

In similar conditions in adults 3 to 6 pills may be administered.

5. Kattuvathi Mathrai.

Jathikai, Jathipathri, Machikai, Lavangam, Koshtam, Athimathuram, Athividayam, aphin, Vilampishin (gum of Feronia Elephantum tree)each ½ tola.

Triturate well after powdering them and insert them in 2 pomegranate fruits (half ripe) about 6 ounces in weight each, making space by removing a portion of the seeds (especially the sour variety of pomegranate are preferred),and close the cut portion with the outer skin of the fruits, cover or roll the fruit with pieces of white linen, and paste cowdung over the cloth. Dry. Burn with 5 or 6 cow dung cakes until the cloth is burnt well. Let it cool. Remove the burnt cloth. Triturate the pomegranate well in a mortar and prepare pills of 5 grains each. A decoction of Nutmegs may be used for trituration if required to prepare a pill mass.

Dose:— ¼ to ½ pill for children.

1 to 2 pills for adults, in honey or in curd for Diarrhoea, Dysentery, bleeding piles, atisara.

6. Anandabairava Mathrai.

Karu Nabhi, Lingam, Gandagam, Manosilai, Rasam, Poritha Vengaram (exciccated Borax) purified, equal parts.

Triturate into a pill mass with lime juice and divide into pills of the size of green gram.

Dose:— 1 to 3 pills in mother's milk, honey or ginger juice (boiled) twice a day.

Specific for Malaria, and all kinds of fevers.

7. Amirthadhi Mathrai.

Athimathuram, Shanbagapoo, Elam, Gorochanam Sathirabedhi, Vettiver, Koshtam Machipathri, Vilamichamver, equal parts.

Triturate with Athandai, (Kathotti) Juice for 2½ hours and prepare pill of the size of black gram.

Dose:—1 to 2 pills b. d. in mothers milk.

A very useful preparation, for children in all kinds of fevers, thirst, and Doshas.

8. Lavangadhi Mathrai (Lexative)

Lavangam	6 viraganidai
Milagu	4 ,,
Pooram	1 ,,

Lingam	1	„
Rasam	1	„
Gandagam	1	„
Poritha Vengaram	2	„
Purified Valam	10	„

Triturate with the decoction of Chebulic myrabolans for 5 hours and prepare pills of the size of black gram.

Dose:— 1 to 2 pills for children, may be given in Ajowan water, pepper decoction or mother's milk.

For Infantile convulsions, fevers, indigestion, fits etc. If administered twice a month regularly for infants, prevents many diseases brought on by constipation; this is a safe purgative.

9. Sandhanadhi Mathrai.

Moongil Uppu, Vellai Kasikatti, Machikai, Elarisi, Valmilagu, in equal parts, finely powdered.

Triturate with sandal wood oil into a pill mass. Make 10 grain pills.

Dose:— 1 pill b. d.

Swallow with cow's milk (boiled) and sugar candy.

The first ingredient should be trituiated with superior quantity of Rose water for 7 days together, make into lozenges and dried before adding.

An cxcellent preparation for Gonorrhea, Urethritis, acute or chronic.

10. Mandoora Mathrai.

Pungam Pattai, Devadaru Pattai, Manjal, Maramanjal, Lavangapattai, Val-milagu, Chitramoolaver pattai, Korai Kishangu, Sevviam, Triphala, Trikadu, each 1½ tolas.

Corrected mandooram 22½ tolas. Cow's urine 3 measures.

Boil and reduce the urine to the cons-tituency of syrup, and add the finely powdered ingredients in the urine, boil to the cons-tituency of a pill mass. Make pills of the size of seeds of abrus precatorius.

Dose:— 1 pill b. d.

To be swallowed with water.

In torpidity of the liver, enlarged spleen, anaemia, Dropsy, Chlorosis, Chronic fevers—Piles.

11. Deepagni Mathrai.

Jeeragam, Perungayam (fried), Induppu, Lavangam, Elam, Ganja (corrected), Sukku, Milagu, equal parts.

Powder and triturate with lemon juice for 5 hours. Divide into pills of 10 grains each. Dry in shade.

Dose:— 1 pill.

To be swallowd with water if there is indigestion or loss of appetite.

12. Swasakasa Mathrai.

Lavangam	1	tolas.
Poritha vengaram(fried borax)	1	„
(Fried white) Thurisu	1	„
Purified Arsenic	¼	„
Moosambaram	1	„
Thippali	1	„
Abini	½	„

Triturate with the bile of black goat for 10 hours and prepare pills of 2 grains each.

Dose: — 1 pill every 4 hours to be slowly chewed.

Indicated in spasmodic cough, althma, and in all diseases of the respiratory system where the phlegm is accumulated in the lungs.

13. Grahani kesari Mathrai.

Rasam, Gandagam, Abraha Basma, Iron Basma, Jathikai, Lingam, Athividayam, Karu nabi, Thrikadu, Kattathipoo, Kadukai, shells of the fruits of Fenoria Elephantum (wood apple); Korai Kilangu, omum, Root bark of Chitramoolam, shells of Mathalai (Pomegranate fruit shell), fried borax, Vetpalarisi, Seeds of Datura, Seeds of Bouducella, Gum Bombax malabaricum (silk cotton tree gum,) Root of Bilvam, each ¼ tola. Abini (Opium) 2 tolas.

Triturate for 10 hours with the juice of the leaves of Datura.

Make pills of 2 grains each.

Dose:— 1 pill b. d. in honey or ghee.

A valuable remedy in all kinds of Diarrhoea, or Dysentry whether acute or chronic.

14. Ramaban Mathrai.

Trikadu, Jadikai, Lavanga, Wood apple gum, Bombax malabricum gum, Aegle marmelos gum, Athividayam, Bonducella seeds, Jeerakam, Omum, Karkadasinghi, Tender fruits of Pomegranate (unripe), Pulp of Aegle marmelos

fruit, Pon-musuttai root, Kattu malli root, Kattu Elam. Equal parts.

Fry them in gingelly oil, to light brown colour, and triturate well with curds to a pill mass.

Make into pills of the size of an Areca nut (about 1 drachm) each.

Dose:— 1 pill b. d. in water, squeezed out of curds.

A safe remedy without opium for Dysentry, Diarrhoea, Atisara, with or without fever.

15. **Nava Boopathi Mathrai.**

Gold leaves, Silver leaf, zinc filings Iron filings, Pearl, Rubies, Mercury, Sulphur, Cinnabar, Realgar, Litharge and Aconite root, $\frac{1}{4}$ tolas each.

Triturate well with lemon fruit juice for 10 hours, make lozenges of the size of a rupee, dry, enclose, in clay pan crucibles. and seal the edges with clay cloth—dry—burn with 50 cowdung cakes—cool. Remove the lozenges and add equal weight of cinnabar, triturate with mother's milk for 10 hours and prepare (like a suppository) sticks $\frac{1}{2}$" x 1" dry.

Dose:—1 to 3 grains, in mother's milk, honey, or fresh ginger juice (boiled)

A very valuable specific in 13 kinds of Janni, Tridoshas, and in all kinds of fevers and other brain or nervous symptoms (plague, Influenza aud pneumonia.)

3. Choornams. (compound powders)

1. Nilavagai Choornam.

Senna (entire plant dried) 30 tolas.

Pepper; Chebulic Myrobolans; Beleric Myrobolans; Cumin seeds; Celestrius Paniculatus seeds; Mesua ferrea; Cardamoms; Cinnamon bark; Picrorrhiza Kurroa; Ipomea turpethum; Abies webbiana; Nutmeg; Cloves; Long pepper; Cubebs; Rock salt; Arrow root; Dried ginger; Each ¾ tola.

White sugar equal to the total weight of the rest of the ingredients.

Dose:— ½ to 1 drachm in honey, or ghee.

Chronic skin diseases, Syphilitic eruptions, Vertigo, Hepatitis, Dyspepsia, Habitual constipation.

2. Jeeraka Choornam.

Immerse the required quantity of Cumin seeds, in the Lemon juice, Eclipha Erecta juice, Bryonia scabrella juice, Phyllanthus Emblica juice, Solanum tribolatum juice, Margosa bark, decoction; Leucas caphalotes juice, in order for 24 hours and dry the seeds under the sun after every immersion. Lastly powder and pass through fine sieve and mix with it sugar, ¼ to the weight of the powder.

Dose:— ½ to 1 drachm with water.

In Pitha disorders, such as billousness, Nausea, Vomiting anorexia, and indigestion.

3. Karpooradhi Choornam.

Exciccated Borax, Cumin seeds, and camphor, equal parts.

Bruise the cumin seeds and triturate with camphor and fry over a clay pan without allowing them to fumes, by gentle heat, and lastly add the borax powder.

Dose:— ½ drachm.

To be administered in 2½ ounces of the following decoction twice a day for 10 days.

Bruised, Pedalium murex (entire plant)	1 ounce.
Water	10 ounces.

Boil and reduce to 2½ ounces.

For Gonorrhea, Urethritis, Cystitis, Spasmodic or senile Retention of urine and in stricture urethra.

4. **Induppu Choornam.**

Rock salt	3 tolas.
Cumin seeds	9 ,,
Dried ginger	15 ,,
Ajowan seeds	6 ,,
Long pepper	12 ,,
Chebulic myrabolans (freed of seeds)	45 ,,

Fry the ingredients, xecepting the salt, to light brown, and finely powder all the ingredients.

Dose:— ½ to 1 drachm b. d. with water.

Anoraxia, Indigestion, Gastritis, and habitual constipation.

5. **Ashta Deepagni Choornam.**

Dried ginger, Pepper, Long pepper, Ajowan seeds, Cumin seeds, Nigella sativa, Asafoetida, and Rock salt, equal parts.

Fry all the ingredients except the salt powder and mix with the powdered salt.

Dose:— ½ to 1 drachm.

To be taken along with food.

In all diseases of the digestive system, due to Vayu dosha, including colic pains.

6. **Perangipattai Choornam.**

Smilax chinensis	24 tolas.
Azima tetracantha root bark	6 ,,
Indigofera aspalathoides	12 ,,
Adenema hissopifolia	6 ,,

Take 1 lb. each of Euphorbia antiguorum, and tirucalli, cut in small pieces and bruised, mix with 16 measures of water and place them in a big clay pot. Cover the mouth of the pot with a white linen and tie around the lid.

Place over this linen smilax chinensis, cut into small pieces, cover with another clay pot and seal the edges (rims of the lower and upper pots) with clay and cloth. Place the pot over fire and boil for hours. Remove—dry in the shade, and finely powder. The other ingredients are to be dried under the sun and powdered finely.

Mix together with 30 tolas of white sugar.

Dose:— ½ to 1 drachm b. d.

Secondary and tertiary syphilis, chronic skin diseases including leprosy and scrofula, urticariel rashes, chronic rheumatism, and all kinds of muscular and neuralgic pains.

To be continued for 20 days, and if necessary repeated after a fortnight.

Diet: Avoid, Turmeric, Mustard, Gingelly oil, Fish, Mutton, tobacco in any form, old foods and sexual intercourse.

7. Vajravalli Choornam.

Selected stalks of vitis.		
Quadrangularis (corrected)		
Dried and powdered	each 30	tolas.
Alpinia Chinensis	3	,,
Cloves	3	,,
Dried Ginger	3	,,
Long pepper	6	,,
White sugar	6	,,

Dose:— ½ to 1 drachm in honey.

Note:—

The first ingredient should be corrected as follows:—

Take well grown stalks of vitis quad, throw of the joints found on both sides by cutting them, collect only the jointless stems and boil them with 2 pints of sour curds mixed with Saindalavana (6 tolas), until all the curds evaporate, dry the stems in the shade and then powder finely before powdering the rest of the ingredients mix.

For gastritis, Indigestion, Anorexia, Biliousness, Hepatitis, Neuralgic and myalgic pains, Arthritis, Skin diseases, Chest pains, Gurgling noises in the abdomen.

8. Sundavathal Choornam.

Dried fruits of Solanum; Verbasci folium; Muraya konigii leaves; Inner kernals of mango seeds; Ajowan Seeds; External shells of Pomegranate fruits; Dried fruits of Phyllanthus Emblica; Trigonella Foenum—Equal parts.

Fry the ingredients, bruise and powder finely.

Dose:— ½ to 1 drachm in Curds b. d.

Diarrhea, Dysentry (acute or chronic)

9. Vallarai Choornam.

Hydrocotyle asiatica leaves

Powdered 30 Tolas.

Cloves; Cardamoms; Nutmeg; Nutmace; Galls; Flacourtia Cataphracta; Thri-phala; Each 3 Tolas. White Sugar; equal parts

Dose:— ½ to 1 drachm. in Ghee.

Hectic fevers caused by megaroga, hot feelings in the rectum, burning sensations all over the body and the body will feel a cooling sensation,

Alterative, Tonic, Diuretic, Emenagogue, Indicated in Scrofula secondary and Tertiary syphilis, improves faculties, Leprosy, Skin diseases, Dysentry and other bowel complaints in children.

Note:—The fresh leaves of Hydrocotyle should be submitted to steaming process.

[illegible]. Amirtha Sanjivi Choornam.

Extract of Cocculus Cordifolinus (Guduchi Sathwam) 3 tolas.

Dates, Cubebs, Aplotaxis, Auriculate, Liquorice root, Thri-kadu, Phyllanthus Emblica (dried fruits), Withania Coagulaus Pooniandhu pattai (Tamil), Cardamoms, Mucuna pruriens seeds, camphor, cumin seeds Saw dust of sandal wood, Saffron, Nutmeg, Cinnamon bark, Masua ferrea, Flaccurtia Cataphracta. Cubebs.

Finely powdered each 3 tolas.
Asparagus Sarmentosus
(dried and powdered) 1½ tolas.
Hypoxis Orchioides
(dried and powdered) 1½ tolas.

Khus Khus root, Tribulus Larmuginosus fruits (dried), Nelumbium Speciosum root. Nymphaea Edulis root. All dried and powdered each ¾ tolas.

Dose:— ½ to 1 drachm in ghee.

Urethritis, Gonorrhea, Stricture Urethra, Cystitis, Neuritis, Rickets, Debility, Menorrhagea, Metrorrhagia, Leucorrhea, Haematurea, Haemoglobinurea

11. Meharajanga Choornam.

Khus khus root, ajowan seeds, Cinnamon bark, Nutmug, Saffron, Gorochan, Mesua ferrea. Nelumbium speciosum root, Mace, Cloves. Aplotaxis auriculata, Phyllanthus emblica (dried fruit), Hypoxis orchioides root, Cubebs, Dates, Grapes, Sandalwood, Pachaparpoora, Thri-kadu, Liquoric root, Paddy seeds fried into flowers, Withania coagulans, Rhus succedanea, Powder, each ¾ tola.

White sugar equal parts

Dose:— ½ to 1 drachm in cow's butter for 48 days.

Burning sensation of the hands and feet, (phosphateurea, Polyurea, Albummirea, Gravel, Urethritis, Cystitis, Dryness of the skin, Hectic fevers, Tuberculous affections, expecially the disceses that are caused by Pitha and heat.

12. Uppu Choornam.

Long pepper, Cloves, Ajowan, Cardamom, Bangle salt. black salt, Rock salt, Common salt, and Nitre each 1 tola.

Senna leaves	2 tolas.
White sugar	6 tolas.

Dose:— 10 to 30 grains, at bed time with water or milk.

Vatha disorders, Gastritis, Constipation, Hepatitis, Indigestion, Heavy feelings in the abdomen, Pitha, Colic, Diarrhea, and expells the accumulations in the intestines.

4. Kashayams. (Decoctions)

1. Adakashayam.

Chirella, Margosa bark, Liquorice root, Adathoda vasika root, Bassia Latifolia flowers,

Cardamoms, Terminalia Chebula, Solanum Jacquinii root, Clerodendron Serrata, Ocimum Sanctum root, Plumbago capanis (root bark), Coriandri fructus, Cyperus Pertenius, Aplotaxis auriculata, Anethi fructus, Sandalwood, Tragia Involucratea, Pavania Zeylanica, Pavania odorata, Tinospora cordifolia. Dried ginger, Terminalia Bellerica, Long pepper, Vitis vinifera fruits, Leucus Cephalotes root, Solanum Tribolatum root, Phyllanthus Emblica (dried fruits) Stercos permum Suaveolens root, Trichosanthes Cucumerina, Toddalia aculeata, Black Pepper, Cinnamon bark, cloves, Embelica Ribes, Khus Khus, Evolvulus Alsoinoides, Mullago Cerviana, Picrorrhiza Kurroa.

Equal parts Bruised.

To 1 part of the above and add 16 parts of water, boil and reduce to $\frac{1}{8}$ part.

Dose:— 1 to 2 ounce b. d.

Any pill, like gorachana, Vajrakandi, Anandabairava, used for different kinds of fevers and doshas may be administered with this decoction,

For fevers of all kinds due to the derangement of one or more doshas. Malaria, Typhoid, Typhus, Para, Typhoid, Pneumonia etc.

2. *Bilva Kashayam.*

Aegle marmelos root	1½ tolas.
Withania somnifera root	1½ ,,
Dried ginger	1½ ,,
Water	4 pints.

Boil and reduce to ½ pint.

Dose:— 1 to 2 ounces.

For Hiccough and Vomiting.

3. *Kashayam for Malaria.*

Jambul bark, Mango tree bark, and Ficus Glamorata bark, Each 7½ tolas. Water 2 pints.

Bruise the barks soft, boil and reduce to ½ pint

Dose:— 1 to 2 ounces b. d.

May be repeated from 5 to 10 days.

For Ratabedi—bleeding through rectum.

4. *Kashayam for Madhumega.*

Cassia auriculata root, bark, seeds, flowers, and leaves, each 6 tolas.

Casearia esculenta bark	6 tolas.
Myrica Nagi bark	6 ,,
Eugenia Jambolana seeds	6 ,,
,, ,, bark	6 ,,

Asparagus sarmentosus	6	,,
Stercospermum suaveolens root	6	,,
Coscinium fenestratum	3	,,
Kalnar (tamil)	3	,,
Hyocyamusniger	$\frac{3}{4}$	,,

Powder and mix together.

Take 1 tola of the powder, boil with 8 ounces of water, reduce to 4 ounces, strain and drink with some milk and sugar, twice a day. (1 tola of the powder is for a single draught), for 48 days continuously.

Reduces sugar in the urine, in diabetes, relieves the thirst and burning sensation of the body which are constantly found in such cases.

5. Decoction for thrist.

Achyranthes Aspera (entire plant,) dried stems of Plantain tree (commonly used in south India for folding snuffs, and also used as dishes for serving foods) Earth worm (boonagam) each one handful.

Fry them until they become ashes, Pour one pint of water and reduce to $\frac{1}{2}$ pint, and strain.

Dose: - 1 to 2 ounces b. d.

Zuenches any kind of thirst however obstinate it may be.

5. Meshugu (Pigment)

1. Panchasootha Meshugu.

Purified mercury, cinnabar, Rasa-karpoora (Crude Calomel Indian), Parchloride of mercury, Rasa Sindura (Red Sulphide of of mercury) each ¾ Tola.

Place them in a clay pan on a hearth, with mild heat, and instil on the ingredients 5 tolas of the oil drawn from marking nuts, Garlic and Yellow yolk of hen's egg.

Mixed in equal quantity in drops until the whole quantity becomes saturated, and finally triturate with the mixed oil at the rate of 3 to 4 hours a day for 5 days, consecutively, to form a soft pill mass.

Dose; · For infants ¼ to 1 grain.
„ Adults 1 to 2 grains.

For infants along with mothers milk and for adults in Palmyra palm jaggery. This should not be repeated for more than 3 days at a time.

For infantile convulsions, Paralysis Tri-dosha fevers (Janni).

For adults, facial Paralysis, Paraphlegia, Hemiplegia, Neuralgia, Rheurmatism, Arthritis Secondary and Tertiary syphilis, Sannipatha fever like Pneumonia, Threatening collapse, and Toxic forms, all kinds of myalgic or Neuralgic pains.

Salt free diet:— Only boiled rice, and hot water to be taken.

2. *Lavana Meshugu.*

Black salt, common salt, valayaluppu (Bangle salt), Nitre, Rock salt, Attuppu, Karuppu, Ammonium chloride, Impure sodium carbonate (pooner), Aplakaram, Borax and asafoetida each 1½ tolas, corrected croton seeds 3 tolas.

Take fully ripe cocoanut and pour away the water, and insert through the hole the above ingredients, triturated together, and fill the remaining space of the cocoanut with the juice of the leaves of Daemia Extensa, and tightly cork the hole with a margosa stick. Cover the cocoanut with fresh cowdung ¼" thickness, dry, burn with 15 cowdung cakes. As soon as the cocoanut shell breaks, remove it from the fire, throw of the shells, and triturate the rest well for 6 hours, until the whole appears waxy soft mass.

Dose:— 5 to 20 grains.

Swallowed with water.

Dymenorrhea, amenorrhea, Gastralgia, Lumbago, Neuralgia, Myalgia, Gastritis, Anorexia, Indigestion, Acidity of the stomach.

A powerful carminative and antacid. Should not be repeated for more than 3 days at a time.

No diet restriction, avoid indigestion use easily digestable foods. In severe cases, Rice gruel is useful.

Note:— Especially indicated in sterility in women.

3. Moosambara Meshugu.

Extract of Alces (barbadensis)	21	tolas.
,, (Indian)	12	,,
Saffron	6	,,
Very old Jaggery (Palmyra palm)	12	,,
Camphor	3	,,
Asafoetida	6	,,

Triturate with honey to a soft pill mass.

Dose:— 5 to 15 grains b. d. followed by a decoction of Anise. 2 to 4 fluid ounces.

Expels the retained discharges in the uterus after delivery. Regulates the flow of

menses in Dysmenorrhea, and relieves the Colicky pains at the time of menses.

4. *Megachintamani Mezhugu.*

(A) Curcuma aromatica; Thespesia Populnea bark; Alangium decapitalum bark; Euphorbia Antiquorum root bark; Euphorbia Tirucalli bark; each 15 tolas.

Note:— Chadhurakalli pattai; Kombu Kalli-pattai. (Tamil)

(B) Calatropis Gigantia root bark; Indigofera Aspalathoides entire plant; Plumbago Zeylanicca root bark; Smilak Glabra Chinensis; Terminalia Chebula (Remove seeds) Picorrhiza Kurroa; Senna root; Clitorea Ternatea; White, seeds, each 7½ tolas.

(C) Nigella sativa, Cubebs, Moringa Pterogosperina seeds, Psoralia Corylifolia seeds, Vernonia anthelinentica, each 1½ tolas.

(D) Hydrargyium Perchloride, (Rasakarpooram) Crude Indian calomel, mercury, cinnabar, Red Sulphide of mercury (Rasa sindura) each 22½ grains.

A to C ingredients are to be finely powdered and filtered and triturated with D, by adding sufficient quantity of honey to form a soft pill mass.

Dose:— 5 to 15 grains b. d. for 20 days

Chronic syphilitic ulcers Buboes, Black patches in the body and plams, Leprosy, Urethritis, Orchitis, Arthritis, Gonorrheal Rheumatism, Asthma, Myalgia, Neuralgia, Dyspepsia, Gastritis, Head-aches, Jaundice and every kind of syphilitic affections, like Gunma.

Diet:-Avoid brinjals, Potatoes, Mustard, Gingelly oil, Sexual intercouse, Pumpins, and similar kinds of vegetables, fowls and fish as well.

5. *Valai Rasa Mezhugu.*

Cut into small pieces 100 seers of the leaves of Margosa tree, place them in a big mud pot and fill it up with water, boil until the leaves become spongy and the water forms a syrup. Strain and collect the water through a blanket.

Take a wide mouthed clay pot with thick bottom, pour the margosa water into this pot and add to it 6 tolas of mercury drawn from Hingula (cinnabar). Place the pot over the hearth and boil without allowing it to foam. The mercury and margosa water will become waxy together, reduce to 30 tolas

Add to this, purified croton seeds	3	tolas.
Asafoetida	3	„
Plumbago zeylanica root bark	3	„
Powdered dried Ginger	3	„
„ „ pepper	3	„

Triturate them together for 10 hours continuously and preserve them in glass jars.

Dose:- 2 to 5 grains b. d. in honey.

Gunma, Vatha and Pitha doshas. Such as dyspepsia, Gastralgia, Rheumatism, Arthritis, Syphilis and its complications, Mental diseases, diseases of the nervous system.

6. Dravakam (Acids)

1. Sanka Dravaka.

Potassii Nitras	18	tolas
Alum	9	„
Rock Salt	9	„
Iron Sulphate (fried red)	22½	„
Copper Sulphate (fried white)	6	„
Sodium Chloride	6	„
Ammonium Chloride	3	„
Borax (fried)	[illegible]	„
Impure Sodium Carbonate (pooneer-tamil)	3	„

Distil as per detailed process by dividing the ingredients into 3 parts. Distil the first part and add to the second, then distil and add to the third and the finally distilled product to be stored for use.

Dose: 5 to 15 minims. In one fluid ounce of water b. d.

Gastritis, Intestinal Colic, Anorexia, Anaemia, Chlorosis, Enlargements of the liver or spleen, Malarial cachexia, Dysmenorrhea, Amenorrhea, General dropsy, and ascites.

2. **Panchalavana Dravaka.**

Potassium Mitras	9 Tolas.
Alum	9 ,,
Common Salt	9 ,,
Ammonium Chloride	4½ ,,
Borax	4½ ,,

Distil as before.

Dose: 5 to 15 minim in water b. d.

Flatulence, Colic, Ghee, Gastritis, Dyspepsia, and other diseases as No. 1.

3. **Chandana Dravakam.**

Sandal Wood Chips; Andropogon Muricatus; Cardamom Seeds; Fennel (anethi.) Each ½ lb. Water 1 gallon.

Bruise the ingredients and keep them soaked in water for 2 days and then Distil.

Dose:— ½ to one ounce (fluid) add 2 grains of Pachakarpoor to each dose.

Produces coolness of the body, improves the constituency of the semen, removes giddiness, Anxious look, Thirst, Feeling of heat, and improves the general tone of the body

4. Milagu Dravaka.

Pepper	1 lb.
Water	1 gallon.

Bruise, and keep immersed in water for 2 days and Distil.

Dose:— 1 to 2 drachms (fluid)

Bronchitis, All kinds of coughs, and Vatha and pitha disorders.

5. Ulli Dravaka.

Bruised Garlic	30 tolas.
Tender cocoanut water	4 pints.

Set aside for 3½ days and distil.

Dose:— ¼ to 1 ounce.

Diarrhoea, Dysentery, Sprue and Malena.

6. Sengottai Dravaka.

Bruised marking nuts	48 tolas.
Water	6 pints.

Set aside for 2 days and distil.

Dose:— 1 to 3 fluid drachms.

Burning sensations of the body due to Vatha or Pitha disorder. Anxious look, Frequent micturition, Flatulence, and uncontrollable thirst.

7. Nei. (Ghee)

1. Thoothuvalai Ghritham.

Roots of solanum Tribolatum, Ocimum sanctum, Oldenlandia Umbellata, Bryonia scabrella, Toddaliac radix, Solanum Nigrum, Amaranthus Campestris, Adathoda vasika, Withania somnifera, each 6 tolas, water 8 pint

Bruise the ingredients, boil and reduce to 1 pint, strain, add ½ viss of cow's ghee, boil until all the water is evaporated, strain while hot and add 6 tolas of powdered sugar candy and preserve.

Dose:— 1 to 2 drachms b. d.

Asthma, Bronchitis, Pharyngitis, Pulmonary Pthisis, Peripheral neuritis.

2. Vallarai Ghritham.

Fresh juice of Hydrocotyle Asiatica
,, Eclipta Erecta
,, Lipia Nodiflora
each 2 pints.

Lemon fruit juice	1 pint.
Cow's milk	4 ,,
Cow's ghee	4 ,,

mix the above together and add the following triturated with cow's milk q. s.

Nutmeg, Mace, Galls, Pistacia Integerrima, Bauhinia tomentosa flowers, Pepper, Cardamoms, Cloves and Liquorice root, ¾ tola each.

Boil until the water is evaporated, decant the ghee strain and add 6 tolas of powdered sugar candy.

Dose:— 1 to 2 drachms b. d.

Skin diseases, Secondary and tertiary syphilis, Chronic ulcers, Phosphaturea, Urethritis and Leprosy.

1 grain of reduced mercury may be used with advantage for each dose.

3. Naval Nei.

Jambul bark bruised	120 tolas.
Water	40 pints.

Boil and reduce to 8 pints, collect the decoction and add the following, triturated with ¼ measure or 4 ounces of cow's milk:— Bark of ailanthus malabarica, Root bark of Cassia auriculata, Seeds of cassia auriculata, Aplotaxis auriculata, Cinnamonbark, Rhus succedania, Liquorice root, Aconitum Hetro-phyllum, Nardo-slachys Jatamanja, Arrow root, Deodar, Mesua ferrea, Curculigo Sarasaparilla root, each ½ tola; Cow's ghee 2 pints.

Boil and Strain.

Dose;— 1 to 2 drachms b. d.

Menorrhagia and Metrorrhagia.

4. Avarai Nei.

Cassia auriculata root bark	60	tolas.
Tender berries of cocoanut palm	60	,,

Jambul bark. Ficus Glomerata bark, Phyllanthus multiflorus root, each 30 tolas.

Bruise and boil with 40 pints of water, reduce to 5 pints, strain.

Add, cow's ghee	4	pints.
Fresh ginger juice	½	,,
Juice of bryonia scabrella	1	,,

Liquorice root, Cumin seeds, Pepper, Althae radix. Pazhampasi (Tamil) root, Rhinacanthus communis root, each 3 tolas.

Kaempferia rotunda root (chengazhunir Kishangu-tamil), Lotus root, Cloves, Nutmeg, Mace, Amaranthus, Campestris root, Portulacca, quadrifida root, Phylanthus emblica, Cardamom, each 1½ tolas.

The external brown thin layer of coating of Tamarind seeds, Seeds of Cassia Auriculata, Tender leaves of Varapoola (Tamil) each 6 tolas.

Cynodon Dactylon root, and gums of acacia arabica, Margosa, Wood-apple, Acacia ferruginea (white variety) and mango tree, Khus khus root dried and fresh, each ¾ tolas.

Boil and strain. Add ¾ tola of powdered long pepper, 6 tolas of white sugar add ½ pint of honey, lastly.

Dose:— 1 to 2 Drachms b. d.

Diabetes mellitus, uncontrollable thirst, Polyurea, Phosphaturea. Albuminurea, Urethritis, Gravel, Gonorrhea, Gleet, Spermatorrhea, Menorrhagia, Metrorrhagia.

5. Adathodai Nei.

Entire plant of Adathodai vasika, cut into small pieces, dried and bruised 150 tolas, to be boiled with 20 pints of water slowly reduced to 2 pints strained, add to it 2 pints of cow's ghee and 15 tolas of flowers of the above plant triturated with sufficient quantity of cow's milk to a soft paste, boil and decant the ghee.

Dose:— 1 to 2 drachms with a teaspoon of honey b. d.

Pulmonary Pthisis, Asthma, Bronchitis, Raktapitha.

6. Sathavari Gritham (for children)

Asparagus Sarmentosus juice	15	Tolas.
Cocoanut pulp milk	15	,,
Cow's milk	15	,,
Goat's milk	15	,,
Cow's Ghee	15	,,
Smilax Glabra Orchinensis	3	,,
Cardamom seeds	1½	,,
Sugar Candy	7½	,,

Boil and decant the ghee.

Dose:— 1 to 2 drachms.

For, Rickets: Emaciation, Debility, etc. Superior to Cod liver oils.

8. Lekyam. (Confection)

1. Jadikai Lekyam.

Prepare a thick syrup with 12 tolas of Palmyra palm sugar candy and 1 pint of cow's milk add the following powders and make a confection with honey and cow's ghee q. s.

Galls, Nutmeg, Poppy seeds, Rhus succedanca (fried), external skin (dark brown) of tamarind seeds, each 3 tolas.

Dose:— 1 to 2 drachms b. d.

For, Enteritis, Diarrhoea, Dysentery, Bleeding piles, Sprue, etc.

2. Kukil Valladi Lekyam.

Purified sulphur, Balsamodendron mukal, each 24 tolas.

Marking nut (remove the pointing edges) sugar of Gulancha (Guduchi sathvam) Sesamum seeds, each 12 tolas.

Plumbago zeylanica (root bark) 6 tolas.

Dried ginger, Pepper, Long pepper, Cuminseeds, Nigella sativa, Three myrabolans. Cubebs, Coriander seeds, Aplotaxis auriculata, Liquorice root, Hyocyami niger, Celestrus paniculatus, Alpinia chinensis and galanga,

Cloves, Clerodendron serratum, Cinnamon bark, Nutmeg, Cardamoms, Wrightia tinctora seeds, Emblica ribes, Withania somnifera, Smilax chinensis, Abies webbiana, Mace, Cinnamon leaves, Pepper root, Tender berries (dried) chebulic myrobolans, Rhus succedanea. Mucuna pruriens seeds, Arrow root, Aconitum hetrophyllum, Cyperus rotundus, Scindapsis officinalis, Hypoxis, Orchioides, Sara seeds, Mercury drawn from hingula (Cinnabar) each 3 tolas.

Purify the marking nut and sulphur. Triturate mercury and sulphur. Finely powder the rest of the ingredients and mix all together by trituration for 3 or 4 days, add equal weight of Palmyra palm jaggery, Pound them together in big stone mortar (household) with Iron wooden pestle, until everying radient is completely and uniformly mixed up. (no boiling process)

Dose: -- ½ to 1 drachms b. d.

For 24 to 58 days, as required.

Anaesthetic leprosy, and all kinds of Leprosies, Chronic ulcers, Skin diseases. Scrofula, Buboes, all kinds of enlarged glands,

Cancers, Mega rogas, and all syphilitic affections.

3. *Karunaikishangu Lekyam.*

Roots of, Aloes indica, Dracontium polyphyllam, Typhonium oxixense, Sansevicria zeylanica, Vitis Quadrangularis, Vitis setosa, Cyperus rotundus, Dried ginger, Chebulic myrabolans, inner pulp of mango seeds, Plumbago zeylanica root bark, cassia fistula gum, finely powdered, 6 tolas each.

Make a thick syrup with 3 seers of Palmyra palm jaggery and water, add the above powders and make a soft mass.

Dose:— 1 to 2 drachms b. d. With or without zinc basma.

In bleeding or inflamed Piles.

4. *Kumari Lekyam.*

(a) Pulp of Aloe leaves washed in water 7 times	1 Viss.
Sugar candy (powdered)	1 ,,
Cow's milk	1 pint.
Sarasaparilla decoction (24 tolas to 2 pints reduced to ¼ pints)	¼ ,,

Poppy seeds(Gasagasa-tamil)
juice (24 tolas triturate
with sufficient quantity of
water and squeezed out)
q. s.

(b) Hygrophila spinosa seeds,
ocimum Basilicum seeds,
cinnamon bark, cumin
seeds, cubebs and nutmeg
powders, each 3 tolas.

Finely cut date fruits (remove seeds,) 12 tolas.

Process:— Place the ingredients (a) in an iron frying pan over a hearth, set fire to the hearth, (gentle fire,) be triturating until the aloes take a fine brown colour, add the ingredients (b), and 30 tolas of cow's ghee, triturate until every thing becomes a soft mass. Set aside. Place this mass in a stone mortar (household) and pound with a wooden pestle, until the aloes mix well with other ingredients.

Dose:— ½ tolas b. d.

Heat produced by Mega rogas, Rickets, Emaciation of the body. Increases the sexual appetite and the constituency of the semen.

In women, it is a uterine tonic; cures various diseases connected with the menses; and removes sterility.

5. Idi Kattuvadi Lekyam.

(a) Nutmeg, Aconitum Hetrophyllum, Rhus succedanea, Cloves, Dried ginger, Cubebs, Galls, Cinnamon bark, Pepper, Banhima tomentosa flowers, Hyocyami niger seeds, Poppy seeds, Each 3 tolas.

(b) Palmyra Palm Jaggery 36 Tolas.

Process:—Fry the ingredients in (a) to slightly brown colour after sprinkling and annointing them with cow's ghee q. s. and powder them well.

Pound the jaggery and add the powders in small quantities until all of them are mixed up (cold process)

Dose-— 1 to 2 drachms, 7 days.

In diarrhoea, Dysentery, Atisara and Grahani.

6. Lekyam for 96 kinds of Sleshma diseases.

Such as Bronchitis, Asthma, Pharyugitis, and Laryngitis.

Long Pepper	67½ tolas.
Alpinia chinensis	67½ ,,
Coriander seeds	4½ ,,

Pepper, Dried ginger, Pepper root, Liquorica root, Phyllanthus Emblica (dried) Cumin seeds, Nigella sativa, Cardamom seeds, Clerodendron serratum, Arrow root, Hyocyamus niger, Withania somnifera, Cubebs, Flacourtia cataphracta, Chebulic myrabolans (seeds removed) Each 2 tolas.

Cinnamon bark, Cinnamon leaves, Nutmeg, Mace, Cloves. Each 1 tola.

Powders of the entire plants of Solanum tribolatum, Solanum jacquini, Elipta erecta. Each 20 tolas.

All the above ingredients are to be finely powdered, passed through a sieve, and mixed together, with 80 tolas of boiled honey and 20 tolas of cow's ghee, to form a soft mass. (Cold process)

Dose:— ½ to 1 drachm b. d.

7. *Ashta Gunma Lekyam.*

Fresh gynandropsis pentaphylla	Juice.
,, Viter quadrangularis	,,
,, Acalypha Indica	,,

Each 2 pints.

Boil together until they are reduced to a thick syrup, and then triturate with the following ingredients to soft mass

(Eluppai Arappu,in tamil.) The remains of the milled seeds of Bassia Latifolia after expressing the oil from them, burnt into

Charcoal	45	tolas.
Thrikadu; Ajowan seeds each	3	,,
Picrorhiza kurroa; Iron sulphite; Hycyami; Niger seeds; Asafoetida each	1	,,
Palmyra palm Jaggery	15	,,

Dose:— ½ to 1 drachm b. d.

Orchitis, Dyspepsia, Gastritis, Enlarged spleen and Liver, Flatulence, Indigestion, Obesity, Constipation, Excessive salvation, Vomitting blood, and all kinds of digestive troubles.

9. Medicated Oils (Internal)

1. *Manda Ennai.*

(a) Fresh juice of:— Ocimum sanctus Cryonia scabrella, Daemia extensa, Tiardium indicum, Cheruppadai(Tamil), Eclipta solanum nigrum, Ocimum Album, Gendarussa vulgaris

Adenema hyssopufolio, Hydrocotyle asiatica Each 10 tolas.

(b) Aloe leaves inner plup alone, cut in small pieces 4 ounces.

(c) Fruits of citrullus colocynth (scrape off skin and remove seeds.) 6 fruits.

(d) Nigella sativa, Trigonella foenum Aplotaxis auriculata Each 1½ tolas.

(e) Buds of michelia champaga flowers ½ tola.

(f) Garlic 1½ tolas.

(g) Castor oil 2½ pints.

Bruise (f), powder (d) and (e), mix with the oil and juices (g) and (a), place the cut pieces (b) and (c) into the oil and boil until the water is evaporated and the cut slices become brown. Set aside until the sediments settle down. Decant the oil.

Dose:—1 to 4 fluid drachms.

Twelve hours after administering the oil give the following decoction.—

Pepper burnt or fried to ashes, Trigonella foenum bruised, onions bruised, Abutilon ndicaum leaves bruised,each 20 grains, aqual

8 ounces (fl) Boiled and reduced to half an ounce.

1 to 4 tea-spoonful according to the age of infants and children.

A specific for Infantile convulsions Bronchitis, Broncho-Pneumonia, Indigestion, anorexea Constipation in infants and children upto 6 years of age.

2. *Kalingadi Ennai.*

Fruit Juice of citrullus coiocynth	3	seers
Juice of fresh Turmeric	[illegible]	,,
,, ,, Ginger	[illegible]	,,
,, ,, Vieex negundu leaves	[illegible]	,,
,, ,, Aloe leaf pulp	[illegible]	,,
Cow's urine	3	,,
Goat's ,,	3	,,
Castor oil	3	,,

Senna root, solanum Jacquinii root, Boerhavia Diffusa root (Sathi saranai tamil) root.

Chebulic myrabolans, Picorrhiza Kurroa, Embelica ribes, Thri-kadu, Cardamoms, Rock Salt Valayaluppu, Kalluppu, Earth salt Savut-tuppu), Ammonium Chloride, Impure carbo-nate of potash (yavakshara), Borax, Aclakaram

Cubebs, Scindapsus officinalis, Garlic, each 1½ tolas,

Boil and decant the oil.

Dose,—½ to 2 ounces.

Once a day for 3 to 5 days, alone or with hot water.

A specific in Dysmenorrhea, Amenorrhea, Sterility, Ascites, Dropsy, Hepatitis, Enlarged spleen, Intestinal colic, Dyspepsis, Jaundice, Disorders of the ovaries and uterus, except Metrorrhagia and menorrhagia.

3. *Gana Ennai* (Cooling oil).

(The author's favourite formulae)

Juice of:— Solanum Nigrum leaves; Eclipta Erecta (karisalai) leaves; Eclipta Prost (Ponnangani) leaves; Hydrocotyle Asiatica leaves; Oxatis corniculata leaves; Agati Grandiflora leaves; Viola Suffruticosa leaves; Aegle marmelos leaves; Onions Lemon fruits Aloe leaves pulp juice; Cephalandra Indica leaves juice; Red tender cocoanut water;

Each 8 ounces.

Cow's milk	2 pints.
Castor oil	4 ,,

Boil together with the following powders triturated into a paste with cow's milk. q. s.

Chebulic myrabolans, Nutmegs, Ajowan seeds, Cumin seeds, Coriander seeds, Aplotaxis auriculata, Each 3 tolas.

Trigonella Foenum Graecum seeds, 9 tolas, and decant the oil.

Dose:-Children ½ to 1 fluid drachms b.d.
Adults 2 to 8 „
with cow's milk butter milk, or cooked rice preserved water.

Rickets, Bleeding piles, Dysenteries' Piles, Urethritis, Gonorrhea, Burning sensations of the body, hands or feet, Intestinal colics, Constipation, Phosphate urea.

A very good tonic for children, better than cod liver oil.

Also in Gravel or stone in the urethra or bladder.

4. Siddhathi Oil.

Asafoetida	80 grains.
Garlic	3 tolas.
Purified croton seeds	3 „
Borax	80 grains.

Milk of calatropis gigantia plant	80 „
Chebulic myrabolan	3 tolas.
Rock Salt	80 grains.
Niggella sativa	80 „
Long peper	80 „
Cocoanut pulp juice	8 seers.
Daemia Extensa leaf juice	8 „
Castor oil	1 seer.

Boil and decant thc oil

Dose:—Adult ½ to 1 fluid drachm,

Children 5 to 20 minims

In ginger juice,

Ginger decoction or pepper decoction.

Infantile convulsions following fevers, Enlargements of the liver and spleen, ascites, dropsy, gastritis, nausea, anorexia, worms. All kinds of stomach and intestinal affections with constipation, A specific in toxemias due to vegetable or animal poisons,

A carminative febrifuge, Diuretic, cathartic and vermifuge.

5. *Garba Sanjivi Ennai.*

Castor oil	18 tolas.
Cow's milk	18 „
Garlic	2 „

Ass's milk	9 ,,
Nigella sativa	80 grains.

Process:—Remove the outer layer of Garlic, cut the inner parts into small pieces; Triturate Nigella Sativa with the oil, mix everything together and boil. When the watery portions have evaporated and while the sediment become waxy if a finger is dipped into the oil it will be felt cool. In this stage the oil is to be taken out of the hearth. Decant the oil.

Dose:- $\frac{1}{4}$ to $\frac{1}{2}$ Tola b. d.

This oil is to be administered to pregnant women for 3 to 5 days every month or alternate month, from the commencement of the 5th pregnancy.

Prevents abortions and premature labour caused by certain bacteria, many complications that commonly occur during delivery will be averted and normal delivery will take place.

The foetus will not be infected with any of the Venerial affections, skin diseases, or any other diseases that the parents suffer from. After the birth of the child it will not suffer from Rickets, skin diseases, or abdominal

diseases. Thus the child will grow well and become healthy and strong.

6. *Ilampillai Vatha Ennai.*

Castor oil 18 tolas.

Cardiospernum Halicacabum leaves, Toddalia Aculeata leaves Honducella Semina leaves, each one handful, (fresh leaves bruised)

Boil together until the leaves become brown.

Dose:-- 1 Teaspoonful twice a day. Mix with this oil 1 grain of Poorapathangam (vide-Reduction of uparasas), for 6 to 8 days.

In Polymyelitis, Infantile Paralysis.

7. *Vipruthi Ennai.*

Juice of:--Indian Senna leaf; Hydrocotyle Asiatica leaf; Lipia Nodiflora leaf; Cassia Tora leaf; Indigofera Augustifolia leaf, Adenema Hissopifolia entire plant; Melia Azedarach leaf; Chinni (Tamil) plant; Clerodendron Inerme leaf; Bonducella Semina leaf; Jatropha curcas leaf, Each 9 tolas.

Castor oil 72 ,,

Long pepper, Nigellia sativa, Berberis aristata, Picorrhiza, Kurroa, Acorus Calamus,

Hydrocarpus Inebriens seeds, Purified croton seeds, Each 1½ tolas.

Garlic and chebulic myrabolam, (freed from seeds) 3 tolas each.

Boil and decant the oil.

Dose:— ½ to 1 Fluid drachm.

Once a day from 3 to 8 days. Multiple and deep seated abscesses, boils, buboes, enlarged glands, any kind of suppurations (except in diabetes and albumen in urine,) fistulas, Sinnses, Arthritis suppurating, Chronic ulcers, whether syphilitic or not.

Diet:— Boiled Rice and hot water only to be taken during the days the oil is administered (salt free diet).

8. *Karappan Ennai.*

Bark of Thespesia populnea;
,, Sengathari (lit, Red brinjal)
,, Ailanthus excelsa;
Solanum Jacpuinii, entire plant;
Serma Indica plant, Each 30 tolas.

Cut the above into small pieces and bruise, boil with 16 pints of water and reduce to two pints, collect the decoction, add to it.

Castor oil 2 pints. and the following ingredients made into a paste with Goat's milk q. s.

Piper nigrum, Nigella sativa, Psoralia corylifolia, Garlic, Acorus calamus, Anisi seed, Smilax chinensis, Isora corylifolia, Each 1 drachm.

Boil and decant the oil.

Dose:— Children ½ to 1 Fluid drachm.
Adult, ½ to 1 „ ounce.

Once a day for 3 to 5 days, salt free diet.

A specific for skin diseases, such as Eczema, Scabies, Pempigus, Boils.

9. *Sivan Vembu Thailam.*

Entire plant of Indigofera asphalathoides. Cut into small pieces, dried in the shade, finely powdered, 1 lb.

Celestrius Paniculata seeds 1 lb.

Bulbous root juice of Bryonia Epigaca q. s.

Triturate well and make into small lozenges of the size of half a rupee and dry them in the shade. Place them in a mud pot and extract the oil by the "Kushi-Pudam" process. A tar coloured oil will flow in drops into the cup. Collect this oil. Add to

(b) Plumbago zeylanica root bark.
Smilax chinensis.
Psoralia coryfolia.
Nigella Sativa.
Wrightia tinctora seeds,
Withania coagulanus bulbous root.
Vernonia anthelmintica.
(Powdered) each 6 Tolas

(c) Purified sulphur
" cinnabar.
" Calomel (Rasa-Kapoor)
" Yellow orpiment
(Haritala) Each ½ Tola.

(d) Castor oil 4 Pints.

Boil a, b, and d, together till the sediments become waxy.

Set aside, strain and decant the oil.

Transfer the oil to the bottle and add the finely powdered ingredients (c).

Dose.—½ to 1 fluid ounce.

Once a day for 5 to 7 days. A specific in syphilis and gonorrhea and all their complications or secondary effects, such as, Gonorrheal Opthalmia. Tritis, Rheumatism, Arthritis, Buboes, Salphingitis, Gleet, Urethritis, Cystitis.

The oil may be repeated after three months, if necessary, until then the effects of the first course, will remain in the body.

Diet:—Avoid brinjals, chillies, mustard and gingelly oil for 3 months.

After the course of treatment is over, the patient should take oil bath, twice a week for one year, (castor oil).

Avoid sexual intercourse for one year.

10. Medicated oils.

(Bathing and internal uses)

1. Mandai Kudachal Ennai.

Fresh juices of:—

Solanum Nigrum leaves; Wedelia calandulacea; Eclipta Erecta; Phyllanthus Niruri; Aegle marmelos leaves; Tiardium Indicum leaves, Each ½ pint.

Gingelly oil 3 pints.
Boil and decant the oil.

For oil bath. Rub on the scalp and bathe in hot water, using some kind of vegetable soap nut or leaf powder for removing the oil.

A specific in migraine and all kinds of Head-aches.

2. Jeeraka Thailam or Sanjeevi Ennai.

Coriander seeds	8 seers
Cumin seeds	1 seer

Bruise and boil with 16 seers of water, reduce to 1 seer, filter and collect the decoction. Boil with 1 seer of Gingelly oil until the water evaporates and the sediments become waxy.

Decant the oil while hot and add the following, finely powdered.

Psoralia Corylifolia	6 tolas.
Chambaga flowers	3 ,,
Curcum Zedoria	1½ ,,

Set aside until the oil cools. Again strain and transfer to bottles.

For oil bath twice a week. Cures all kinds of biliary troubles, such as, heaviness of the head, head-aches, sleeplessness, burning sensations in the eyes, hands, feet or whole body. The excessive heat of the body will be relieved.

3. Seerachengashuneer Thailam.

Juice of the entire plant of:—

Seerachengashuneer	1 seer.
Pepper	¼ ,,

Cow's milk	½	,,
Gingelly oil	1	,,

Triturate pepper with milk, mix with the juice and oil. Boil and decant the oil.

For oil bath twice a week. A specific for conjunctivitis, keratitis Gonorrheal opthalmia. Removes all kinds of inflammations and redness of the eyes including secondary affections after operations on the eye balls or lids.

4. Peenisa Thailam.

Gingelly oil, and juices of vitex negundu eclipta erecta, Each 2 seers.

Add the following ingredients triturate with goat's milk to a soft mass

Rock salt, alpina chinensis, long pepper, Roots of Ricinis Communis, Root bark of Holarrhena antidysentrica, Tabernaementana coronaria, Dried ginger, Aplotaxis auriculata, Strychnos potatorum seeds, Dill seeds, Embelia ribes. Liquorice root, Each 1½ tolas.

Boil and decant the oil. For oil bath once a week. Also, a few drops to be insufflated into the nostrils every day in Peenisa

roga, Haemophilia, Epistaxis, Catarrhal discharges from the nose neuralgic pains in the forehead with sneezing, ulcer nose, and in bad smelling pus discharges of the nose, including conjenital syphilitic affections of the Nose.

Roots of Cynodon Dactyolon Grass freed of its joints and the bark, 5 viss.

Bruise and boil with 16 seers of water and reduce to 1 seer, strain and collect the decoction and add to it.

Cow's milk 2 seers, and gingelly oil ½ seer.

Boil and decant the oil. For oil bath, twice a week.

Vatha rogas, like muscular pains; excessive feelings of heat in the rectum like constipation piles; feeling heat all over the body caused by taking such medicines as mercury, sulphur, plumbago zeylanica, burning sensation of the generative organs and abdomen skin diseases with burning sensation and putrid smell; Pitha rogas like anorxia, vertigo and Hepatitis Palpitations of the Heart, valvular diseases of the heart, Migraine Psoriasis, Peenisa Roga catarrh of the nose.

11. Liniments.

1. Mayana Thailam.

Bees Wax	120	Tolas.
Sodium chloride	120	,,
White marble stones	120	,,
White sands	60	,,
Ajovan seeds	15	,,
Turmeric	15	,,
Jatamansi	7½	,,

Bruise the hard ingredients, Turmeric and Jatamansi, powder ajowan seeds, mix them up with sodium chloride, stones, and sands, keep them in a dish. Melt bees wax and pour the liquid over the ingredients contained in the dish. Mix them together, pack them in the distillation apparatus made of two clay pots. Seal and distil as directed. The heat should be regulated as necessary. Apply gentle heat in the beginning so that the bees wax may slowly melt and hold the ingredients uniformly in the mixture so that the ingredients may not turn into charcoal and thus lose their virtues.

A valuable specific when painted and gently massaged over the painful parts and inflamations, such as rheumatism, synovitis, arthritis, myalgia, neuralgia, contusion, and

bruises, scorpian stings, and other venomous bites and stings, Gonorrheal or Tranmatic orchitis, Balanitis. For painting the gums in pyorrhea alveolaris, odentalgia and for plugging the cavities of carious teeth. Paint also over the inflamed glands. Paint over the painful parts. Apply hot fomentations after half an hour and put on a flannel bandage in arthritis, synovitis, Rheumatism, and orchitis.

This oil acts instantaneously and relieves the severe pains wherever they may be. This is far superior to Iodine and other liniments of the western pharmacopeia, and also Ksheerabala of Ayurveda.

2. *Vatha kesari Thailam.*

(a) Juice of Euphorbia Antiquoram
,, Vitex Negundu
,, Clerodendron Phlomidis
Each ¼ Seer.

(b) Goat's milk, Milk of calatropis Gigantia, Castor oil, and gingelly oil, Each ¼ Seer.

(c) Tri-kadu, Chebulic myrabolans, Garlic, Asafoetida, sulphur, Aplopaxis Auriculata and mustard, Each 1 drachm.

Mix (a) and (b) together, triturate (c) with some goat's milk and add to the solution, boil and decant the oil.

Rub the oil and massage the painful parts. Useful in all muscular and Rheumatic pains and also in paraphlegia and Hemiplegias.

3. Oil for 13 kinds of Janni.

(a) Oil seeds of Margosa, Pongamia Glabra, Alexandrian laurel,and Jatropha cureas and cow's ghee (Clarified butter) each ¼ Seer. Ant's eggs (Musurumuttai--Tamil—contains formic acid.) 6 Tolas.

Yolk of hen's egg No. 10.

(b) Cinnabar, Plumbago Zeylanica root, sulphur, mercury, white arsenic, aconitum Ferox, Pepper, long pepper, Scindapsus officinalis, cloves, purified croton seeds, Each 1 drachm.

Triturate with the decoction of Plumbago zeylanica root bark q. s. (1 part of root bark to 16 parts of water, reduced to ⅛ th part) and mix with (a) and boil. While boiling add the milks drawn from the following:—

Calatropis gigantia, Sarcostemma, Brevistigma, Euphorbia antiquorum, euph.

nerifolia, and euph. tirucalli, opuntia dillenii, neruin odorum, each ¼ seer.

And then add 5 panavadai (Tamil) musk triturated with ¼ seer Mother's milk and also the leaves of Polyganum of Barlatum and garlic, each 6 Tolas, to be triturated and added.

Boil and decant the oil and add powdered Gorochan 20 grains and preserve. (Internally) in teaspoonful doses once in a day in Tetanus, fits and convulsions, Hyperpyrexia, cramps, severe pains in any part of the body, collapse, shock, syncope, coldness of the extremities, cold and clammy perspirations, pneumonia, and similar affections threatening to death.

Externally, rub and massage the oil in the above conditions.

12. Surgical Treatments.

1. Ear Drops.

Coscinium Fenestratum, Garlic, Dried ginger, Isora corylifolia, Crab's flesh, Ant's eggs, Yellow yolk of (Dark fleshed hen's) egg, Nigella sativa, Oyster flesh, each 18 grains.

Juice of Euphotia Nirrelea leaves.	6	Tolas.
Erythrina Indica leaves.	6	,,
Cow's milk.	18	,,
Neem oil	18	,

Triturate the ingredients with the juices mixed together, boil slowly until the sediments turn waxy and decant the oil.

Otorrhea, Otitismedia, and similar ear troubles, a few drops to be instilled into the ear and plugged with cotton wool.

2. Porai Ennai.

Juice of Argemone mexicana	½	seer
Milk squeezed out of cocoanut pulp	½	,,
Cocoanut oil	¼	,,
Aconitum Hetrophyl	1	Tola
Nutmeg	1	,,
Nigella sativa	1	,,
Psoralea corylifol	1	,,
Catechu	1	,,

Powder the ingredients and boil until the watery contents evaporate, decant and strain in a bottle containing ½ tola of powdered crude calomel (Rasakarpoor).

A powerful antiseptic dressing in carbuncles, leprotic ulcers, suppurating arthritis of any joint, sinuses, suppurating glands, syphilitic ulcers, and any unhealthy sores. Fine linen gauze soaked in this oil may be plugged to cavities, or the oil alone may be instilled into and the part bandaged with a few plantain leaves over the area. This dressing need not be changed for 24 hours even in highly septic cases with purulent discharges.

3. Oil for skin diseases—A.

Turmeric, rock salt, Berberies Aristeta, Psoralia corylifolia each 1 Tola

Milky juice squeezed out of cocoanut pulp 72 tolas.

Boil after triturating the ingredients with the milky juice, until the oil is formed and decant.

Paint the parts affected with the above.

Eczema, scabies, Pempigus, Psoriasis and other eruptions of the skin.

4 Oil—B.

Aristolochia Bracteata (fresh) entire plant 24 tolas.

Acorus calamus 12 „

Bruise and mix with 36 tolas of cocoanut oil, in an Iron frying pan and keep under the sun for a week (Do not boil)

External application as No. 3.

5. Pachai Ennai

Cocoanut oil	1 viss.
Juice of datura plant	2½ ,,
Copper sulphate	¼ ,,

Boil and decant the oil. A cheap and efficient antiseptic dressing for unhealthy ulcers, wounds, or sinuses even when sepsis has set in. As a paint on the inflamed glands and bandaged with cotton wool, reduces the pain and swelling.

6. Ear Drops.—B

Juice of Datura plant	1 seer
Cocoanut oil	1 ,,

Boil and decant the oil.

A few drops instilled into the ear and plugged with cotton wool, relieves all kinds of pain in the ear, Otorrhea, otitis media, and other ear troubles.

7. Datura Liniments.

(Author's formulae)

Datura plant juice	1	seer.
Withania somnifera plant Juice	1	,,
Calatropis Gigantia leaf juice	1	,,
Vitex Negundu leaf juice	1	,,
Gingelly oil or ground nut oil	2	,,

Boil and decant the oil.

Rub the oil exterally in all kinds of pains. A very cheap and efficient treatment for use in charitable dispensaries.

8. *White ointment.*

(For ulcers and burns.)

Green variety of shorea Robusta (Pachavettu Tamil)	10	Tolas
Cocoanut oil	20	,,
Rasa Karpoor (crude calomel)	$\frac{1}{8}$	,,

Powder finely the first ingredient, and melt with oil in a mud pot. Sprinkle over the melted liquid the finely powdered calomel and see that the powders mix well with the liquid by means of a spoon or rod. Pour them on a bucket full of water and set aside until the liquid is cooled and clotted. Put the two palms

of your hands and rub the clots until lather forms in the water, and the clots turn like soap lather. Collect the lather and preserve in wide mouthed jar containing pure water. Take the required quantity whenever necessary, squeeze out the water by rubbing it between the fingers, spread on a cloth and apply over the ulcers or burnt parts once a day.

An excellent ointment for ulcers and burns; it is an antiseptic without irritating properties. Heals very rapidly.

9. *Ointment A.*

Crude calomel, alum, cinnabar, and litharge each 1 tola.

Cow's butter 1 lb.

Powder the ingredients and triturate with butter in a stone mortar (kalvam) while triturating them pour some cold water, and wash. Repeat washing after trituating for half an hour, 6 to 12 times. Then collect the ointment. An antiseptic dressing for all kinds of ulcers, wounds bruises suppurating glands such as buboes, and scrofulla and any kinds of unhealthy sores and skin diseases.

10. Ointment. B.

Cinnabar, Litharge, crude calomel, white Daminer, Terminalia Belerica, and chebula, Galls each 5 Tolas,

Powder well and triturate with 1 lb of Butter. Place the mass in water for 12 hours and then transfer to a jar.

Use in similar conditions as No. A.

11. Black Plaster.

Red oxide of Lead	6 Tolas
White Dammer	24 ,,
Crude calomel	½ ,,
Copper sulphate	½ ,,
Perchloride of mercury	⅓ ,,
Litharge	½ ,,
Gingelly oil	24 ,,
Bees wax	24 ,,

Melt the bees wax and white dammer along with oil, add the other ingredients in an iron frying pan, keep on triturating the liquids over gentle fire, until it becomes a plaster mass. Preserve in whide mouthed jar.

Spread on linen or calico and apply to wounds, superficial ulcers, as a plaster. This

will stick on the parts like Emplastrum Resine and at the same time heals the ulcer. If there be no oozings or other discharges, the plaster may be kept on the parts for any number of days without changing the plaster once applied.

12. Eye Drops.

Pour the white yolk of a hen's egg in a porcelain cup, sprinkle over it 10 grains of finely powdered Alum and churn with the roots of Amaranthus campestris until the ingredients become frothy.

Apply this forth into the eyes by the finger ends

For conjunctivities, catarrhal opthalmia.

13. Eye Paste.

Boil finely powdered Terminalia chebula in the juice of pomagranate fruit (Acid or sour variety) q.s. till they form into a soft paste.

In opthalmia apply the paste all round the eye, while warm.

14. Collyrium for all kinds of Eye diseases.

Make a syrup of the following by boiling them together.

Cocoanut water (Red variety) 4 pints

Eclipta Erecta root; Amaranthus Campestris root; Three myrabolans, each 6 tolas.

Sandal wood, aplotaxis auriculata, cloves, cosinium fenestratum, cardamom seeds, liquorice root, cumin seeds, Pinus Deodara, Michelia champaga flowers, Bulbous root of lotus, prunns, puduin, Vitevera Zizanioides khus-khus root Each 18 tolas.

Bruise well and boil until a thick syrup is formed, strain and collect the syrup.

Take 10 grains of each of the following: Copper sulphate, Ossepic, Antimony Sulphide, Thalictrum Foliolosum and Alum.

And triturate with the syrup adding in quantities until the whole syrup is used up. Dry this mass in the shade.

Finally add 2 grains ot Pachakarpoor and triturate the dried mass with sufficient quantity of pure honey from a soft paste.

Just touch the paste with finger and apply into the eyelids.

Conjunctivities. Iritis, Keratitis, Granular lids, Follicular Conjunctivitis, Glancoma,

early Cataract, Blepharitis, and all kinds of eye diseases (lids and eye ball) and also in opacity of the cornea or ulcer.

15. Powder for Eye diseases.

Borax 16 grains, copper sulphate 32 grains, Alum 48 grains, the purified shells of hen's eggs 64 grains, and Cypraea Moneta (porcelaneous shells) 128 grains.

Powder and triturate with the following Juices for 5 hours in each.

Lemon fruit juice and Amaranthus campestris entire plant Juice. Prepare a mass of the whole and let it be dried.

Cover this mass with the paste of the roots of Amaranthus Campestris, place it in a clay pot and burn it into ashes.

Triturate the ashes into fine powder in a clean mortar and preserve in suitable bottle.

Place a grain of the powder between the eyelids once a day,

Granular or Follicular opthalmia, Blephaaritis, Chalazion, Keratitis, burning sensation in the eyes and similar eye diseases.

16. Sticks for eye diseases.

Prepare sticks by triturating the following ingredients with lemon fruit juice for 120 hours, and dry them in the shade.

Tortoise shell (small variety, found in the wells, tanks and Rivers), Tortoise shell (sea variety), Antimony sulphide, Human skull bone, Asphaltum (kalmadham--Tamil), Horse's tooth, Elephant tusk, wild pig's horn, cock's chest bones, strychnos Potatorum, Copper sulphate, Zinc sulphate, Conch, Pearl, Bolus Armenia Rubra, Thalictrum Foliolosum, and symplocos Racemosa, equal parts.

Rub this stick in breast milk and apply into the eye lids, twice a day.

In opacity of the cornea, cataract, opthalmia, Keratitis, Iritis, Granular lids and in all kinds of eye diseases, including night blindness and colour blindness.

17. Another kind of stick

Triturate the following with Lemon fruit juice for 3 days continuously and prepare sticks.

The roots of Eclipta Erecta (ponnangani in Tamil) and Amaranthus campestris, Long

pepper, copper sulphate, zinc sulphate and flowers of tamarind tree, Phyllanthus Reti--culatus root (Vara--poola - veir --Tamil) equal parts.

18. Neelanjana Mye for Eye diseases.

Antimony sulphide	3 tolas.
Sugar candy	3 ,,
Thalictrum Foliolosum	67½ grain
Saffron	34 ,,
Fried Alum	¾ ,,
Pachakarpooram	¾ tola

Triturate the above ingredients with the following juice for 5 hours in each.

Leaves of Aegle marmelos, Bryonia Scabrella, Boerhavia diffusa (swetha-Punar-nava--sans or vellai charanai, Tamil), Eclipta Erecta (Karisalai Tamil), Tabernae montana coronaria flowers and palmyra palm (stem) tender stalk bruised and squeezed.

Finelly triturate with honey q. s. to form a thick syrup.

Apply into the eye lids, twice a day.

In all kinds of eye diseases.

CHAPTER XXI.

Special diseases.

Attention is drawn in this chapter to some special diseases and their treatment, since such hints will be useful for the physician in the course of his daily practice. The hints are given briefly:—

1. Appendicitis.

Purified mercury	1 tola
Fresh leaves of Pavania Zeylanica	10 ,,

Triturate together and make 10 grain pills preserve in honey.

1 Pill every 3 hours until 6 pills are taken.

Hot fomentations to the painful part.

Castor oil, Turpentine and starch conjee enema every 4 hours.

If no improvement is found within 24 hours the patient should be submitted to surgical treatment.

2. Malarial Fevers.

(1) Ocimum Sanctum leaves
Leucus Cephalotes Flowers

Garlic, Pepper, Each 1 drachm.

Triturate into a paste and take every morning for 3 days. After this course, continue the fever decoction for a fortnight.

(2) Flower buds of Calatropis Gigantia 1 to 3 buds to be chewed and swallowed along with Betel leaves in empty stomach.

Only one dose should be given and this should not be repeated.

In chronic cases, a medicated oil containing lac.Pavonia Zaylanica and Withania Somnifera should be used for oil bath. Also during convalsence, the choornams of Aswaganda or Talisapatra should be given for a month or more, to prevent relapse.

3. Syphilis

(Primary, Secondary or Tertiary)

Chancre, Buboes, and Gonorrhea.

Purified crude calomel	1	drachm.
Ajowan seeds	1	,,
Cardamom seeds	1	,,
Cloves	1	,,
Castor oil	10	ounces.

Red cotton flower juice q. s.

Triturate the ingredients with the flower juice to a soft paste, mix with oil and keep it under hot sun for a day. Give in 1 to 2 teaspoonful doses once a day for 5 or 7 days. Diet:- ordinary simple diet, avoiding pungent articles, fish, fowls, sheep and such other vegetables like bringals, plantains, pumpkins.

4. Syphilitic or Gonorrheal Arthritis.

Purified croton seeds	4 drachms
Cardamom seeds	2 ,,
Dried ginger	2 ,,
Purified crude calomel	2 ,,
Milk drawn from Pongamia; Glabra tree bark	3 tolas
Castor oil	1 pint

Triturate together and keep under the Sun for three days.

Dose 1 to 2 Fl. drachms, once a day for 5 to 7 days. Diet as before.

5. Enlarged Glands. (Buboes)

Melt equal parts of sulphur and Hydragyri Perchloride after powdering them and cool. Triturate with lime water (Liquor calcis) and apply once a day for a couple of days.

In acute Cases

(1) Fresh leaves of Anisomelos malabarica called Pashampasi in Tamil,

A woolly shrub	3 tolas
Cummin seeds	1 ,,

Triturate with 8 ounces of buffalo's curd and administer every morning for 3 days.

(2) Fresh leaves of cherodendron

Ineme	3 tolas
,, Anisomelos Malabarica	3 ,,
, Phylanthus Niruri	3 ,,
Excicated Alum	20 grain
Buffalo's curd	8 ounce

One dose every morning for 3 days.

(3) Pepper and the leaves of Adenema Hissopifolia equal parts triturated together and taken in doses of the size of Tamarind seeds every morning from 5 to 10 days.

Diet:- avoid pungent articles.

(4) Gonorrhea with yellow coloured discharge.

Gingelly oil	½ ounce (Fl.)
Juice of fully grown Vitex quadrangularis	½ .. (Fl.)

Mix together and give every morning for 3 days. Diet. Boiled rice and hot water.

In chronic cases.

(1) Melt powdered white Vateria Indica and cow's ghee equal parts and pour them over cold water. After cooling rub with palms until they appear like soap froth. Collect in wide mouthed jars.

Dose: 5 grains with milk B.D.

(2) Sandanadi pills.

For enlarged glands, scrofula, Buboes, Boils, Abscess, and Guinea worm abscess.

1	Marking nuts	¼ lb.
2	Bees Wax	¼ lb.
3	Raw seeds of croton tiglium	1 tola.

Fry the nuts (1) until the oil is about to come out of the seeds, and triturate with croton seeds and then pour over the triturated mass of seeds the melted Bees Wax. Again melt together and allow it to cool. Make lozenges of different sizes to suit the proportionate size of the inflamed area. Place the lozenge over the part and tie up with a bandage. This need not be removed until the swellings subside.

8. For Menorrhagia and Metroragia.

1 Tender flowering buds of cocoanut tree 3 tolas.

Cow's milk or butter milk 8 Fl. ozs.

Triturate filter and administer as a single draught every morning.

2. Tender flowering buds of Ficus Glamorata 1 tola.

Buffalo's butter milk or curds 4 Fl. ozs.

Triturate and administer every morning.

3. Barks of Odina Wobier and Jambul in equal parts--made into a decoction with water (1—16, reduced to $\frac{1}{8}$ th part) and given in 2 fluid ounces doses, twice a day.

9. Preventive of Puerpural Sepsis.

Ammonium chloride, camphor, frankincense, and purified cinnabar equal parts.

Triturate into a pill mass and divide into 5 grain pills. 1 pill B.D. to be chewed along with pan supari or with betal leaves alone from the day of child birth for 7 days.

10. To find out if the foetus in the womb is alive.

Apply cow's butter to the abdomen. If the child is alive the butter will melt otherwise note that the child is dead.

To deliver the dead foetus (exclusive of abnormal presentation or monster or twins.)

1 Bark of Gmelina Parvifolia 20 grains.

Triturate with water and to be taken internally as a single dose.

2 Daemia Extensa root 20 grains triturate with cow's milk and give internally.

Apply over the abdomen in such cases a paste made of:

Roots of Vitex Quadrangularis and
" Tylophora Asthmatica
Each 1½ tolas.

Triturate with water.

11. Lactagogues.

Garlic (freed from external skin)	1½ tolas.
Cow's milk	1 pint.

Boil until garlic becomes soft and churn so that garlic becomes mixed up well.

Add powdered cardamom seeds 60 grains
White sugar 1½ tolas.

Fiat Haustus.

To be given every morning in empty stomach. Externally apply the leaves of castor plant after warming them over fire, to the breasts.

12. Antigalactic.

Apply any one of the following to the breasts as poultice after warming them, Jasmins flowers or the leaves of Portulaca oleracea.

13. For Turning Grey hairs dark.

Collect the entire plant of Sphaeranthus Hirtus or amaramthoides before flowering and Eclipta Erecta in equal parts–dry–powder–and mix together, in ten grain doses, twice a day in honey. Administer for 48 days.

Externally apply a paste made of fresh and green leaves of Senna Indica and Lawsonia alba.

14. For Odentalgia.

Apply a paste of Plumbago Zeylanica root to the sole of the right foot if the pain is in the left side and vice versa.

15. For Hemicrania.

Make a paste of the following and apply over the malar bone on the side of the pain.

Saffron, Opium, Gum of wood apple tree, Palmyra palm jaggery, equal parts.

16. For Heat boils, Scabies and Eczema.

Fresh inner bark of Thespesia Populnea (after removing the external or superficial irregular dried barks) of old trees 10 tolas.

Bruise well with 8 or 10 fluid ounces of fresh cow's milk (unboiled) and filter through linen four times and administer inter nally for 3 days in empty stomach every morning.

Salt free diet.

For children from 1	to	5 years	1 to 3 tolas	
,,	5	10 ,,	4 to 6	,,
,,	below 1 year and suckling.			

Mother of the bady should take in the medicine in doses of 6 to 8 tolas of the bark and observe the diet restrictions.

This preparation will act as a purgative If it does not act so, when tried on the first

day, any purgative like Jeevaratna Pills, Poomani Pills may be given, dissolved in the milk along with the bark.

Externally apply the following oil or any of the oils mentioned already.

Flowers of Pandanus odoratismus cut into 1" pieces	20 tolas.
Gingelly oil	1 pint.

Place them in a mud pot seal the mouth—place underneath a pit and cover with earth for 20 days and then apply the oil.

17. For Ringworm.

1 Leaves of cassia Alata to be made into a paste with the lemon fruit juice, and applied on.

2 Inner pulp of the seeds of Butea Frondosa rubbed with lemon juice.

3 A few shells of Cypraea Moneta to be kept soaked in lemon juice for 3 days until they become soft, make into a paste and apply to the parts.

4 A paste made with lemon juice of the roots of Calatropis Gigantea and Cassia Tora seeds.

5 Seeds of Hydrocarpus Inebriens triturated with lemon juice or sour butter milk

6 Red orpiment 3 tolas, Turmeric 2 tolas and slacked lime 1 tola, make a paste with water and apply.

18. For Evacuating the uterus.

Vegetable or medicinal curette for evacuating the uterus after child birth. Regulates the discharge when found scanty or absent, threatening Puerpural sepsis.

Bruise, entire plants of

Mullago Spergula	1 ounce.
Water	16 Fl. oz.

Boil and reduce to 2 fluid ounces. Strain and add palmyra jaggery 1 ounce.

Dose:— 1 to 2 Fl. oz. B. D,

To be continued for 3 or 4 days until the desired effect is produced.

19. For delayed expulsion of placenta after child birth.

Bruised, entire plants of Solanum

Verbascifolium	4 ounces.
Garlic, anethi fructus and P. jaggery each	1 ounce.
Water	16 Fl. oz.

Boil and reduce to 2 Fl. ounces in single draught.

20. For Insanity.

3 Tolas each—Human Skull and Alum—to be triturated with Lemon fruit juice—make lozenges—size of a rupee coin—dry--enlose and seal in clay pans burn with 30 cow dung cakes. Cool and power.

In 15 grain doses for adults to be administered for 12 days--twice a day--with the following.

Ass's Milk 1 Teaspoon, Fresh Ginger juice ½ Teaspoon, white sugar ½ teaspoon.

Instill into the nostrils one or two drops of the juice of Leucus Cephalotes—once a day.

Rub the following juices on the scalp of the insane, and pour over his head 100 pots of cold water every day—early morning.

Luffa Amara, Anisomelos Malabarica Trichosanthes Cucumerina, Colocynth, Peyathi, Peithumbai and Lemon fruit juice.

Diet:—Boiled rice and Dhall only to be taken. Salt free diet for 12 days.

21. *For all kinds of Leprosy.*

Prepare oil by destructive pit process, of the dried roots of oleander (Red flowering)

Give one minim of this oil in water once a day for 3 days—every morning.

Salt free diet—use only boiled Rice and Dhall.

Give bath on the 7th day and use fried salt and Tamarind.

This preparation is especially useful in Leprotic ulcers--which heal rapidly.

Leprosy (continued)

Seeds of "airashanji" freed from shells 3 Tolas.

Corrected crude calomel 3 Tolas.

Triturate with ass's milk for 12 hours and fry over the fire to a pill mass. Make pills 2 grains each.

1 Pill b. d. in 18 kinds of Leprosies mentioned—to be swallowed with milk or water.

Diet:—Avoid gingelly oil, fish, sheep, bringals.

22. *For Anaesthetic Leprosy.*

Dried and powdered root barks of "Irangashunji" 3 tolas.

Fine fillings of Hart's horn or its Basma 3 tolas.

Mix together.

Dose:— 5 to 10 grains in hot water b.d

23. *For Dropsy, Ascites, Bright disease. Albuminaria.*

(Whether cardiac, hepatic or renal.)

Terminalia Chebula No. 10 (Remove Seeds)
Goat's Urine 10 Fl. Ounces.

Triturate and administer every morning for 3 days.

Salt free diet

Children may be given in proportionate doses. This is a specific.

24. *For Haematurea.*

Rice of the boiled Paddy 3 Tolas.
Virali Ilai 3 „

Steap the rice in the cold water for a couple of hours, pound with the leaves. (One dose.)

Give this internally for 3 days, twice a day. Avoid hot and pungent foods.

25. Dropsies.

For all kinds of dropsies whether they are caused by anaemia, Chlorosis, Cirrhosis of the liver, heart or kidneys, sprue or chronic Diarrheas and Dysenteries, Jaundice.

Amaranthus Campestris,
Roots of Tribulus Larnuginosus
,, Hygrophila Spinosa
,, Spinacca Oleracca (Veeshi—Tamil)
,, Coccinia Indica
,, Eclipta Indica
,, Aerna Lanata
,, Tragia Involucratac (Red)
Bark of Thespesia Populnea
,, Oonjal (Tamil)
Tender leaf buds of jambul
Each 18 tolas.
Terminalia Chebula
Picorrhiza Kurroa
Nigella Sativa
Vernoni anthelmintica
Long pepper
Each 12 tolas.

Bruise the above, mix together, and divide into six parts.

Take one part and boil with 4 seers of water reduce to ½ seer. Filter and administer one half of this decoction in the morning and another in the evening.

In the above manner administer for 6 days continuously. Salt free diet—use barley water or boiled Rice and hot water without salt for 6 days.

26. For Caries tooth.

Heat 50 fruits of solanum Jacquinii in a heap of Paddy husks, and remove the fruits before they are charred. Triturate the fruits with the juice of the leaves of momordica charantia into a paste for about three hours, mix with half a seer of gingelly oil and place it under hot sun for 8 days.

Plug the cavities of the tooth, with this oil soaked in cotton wool.

27. For Scanty menstrual flow.

1. Triturate 1 to 2 drachms of the fresh roots of Jatrophacurcas with 8 ounces of fresh milk of the cow and drink every morning for 3 days.

2. drink 2 ounces of cow's milk and equal quantity of Barleria Prionitis leaves juice every morning for 3 days.

3. Althae leaves, Garlic and pepper each 3 tolas and acorus calamus 52 grains, triturate with water and divide into 3 doses. 1 dose every morning for 3 days, at the time of menses.

4. Tender leaves of Daemia extensa and peper each 20 grains pill mass 1, Every morning for 3 days.

5. Garlic and pepper and bark of Crataeva Religiosa each 1 drachm. Pill mass 1. Every morning for 3 days.

28. To induce vomiting for expelling the secretion of bile.

1 Root bark of Alangium Lamarchii

Dose:— 1 to 2 drachms.

Triturate in hot water and administer internally. To stop this, bathe in cold water and take butter milk and rice (boiled)

2 Make a hole in a lime fruit and instill into it 3 drops of the milk of Calatropis Gigantia set aside for over a night and suck

the lemon juice in the morning. This will produce vomiting.

29. For Nausea, Anorexia, Biliousness and vomiting of bile or white secretions and acidity.

Take 3 fully ripened lemon fruits. Cut each of them into 4 parts. Press over the cut parts the following powder; set aside for a day and suck the juice of one fruit every morning for 3 days.

Trikadu, Ajowan seeds, and asafoetida each $\frac{3}{4}$ tola.

30. For Hiccough.

1 Make cigarettes with paper, containing equal parts of Sandal wood saw dust and Frankinsence and smoke.

2 Triturate the following with honey and administer as a single dose. Long pepper 8, and cumin seeds 10.

31. For Hiccough with fever.

Triturate equal parts of sugarcane jaggery and frankincense into a paste and administer in dose of 5 to 10 grains every three hours. In 2 or 3 doses.

32. For Hiccough, dry and furred tongue during fever.

Roll the following ingredients in a piece of black silk cloth into a ball, dip in honey, place in a clay pan dish, and burn it over a hearth until the cloth ball and its contents become charred. Then triturate with honey into a syrup and rub on the tongue as often as necessary until the symptoms subside, including vomiting and nausea.

(Another formulae.)

Terminali Chebula; Dried ginger; Borax; Alum; Sugar. Each 20 grain.

Honey	1 drachm.
Lemon juice	4 ,,

Triturate well and apply to the tongue.

(Another formulae)

Inner pulp of cotton seeds, Cumin seeds, Liquorice root, Cardamom seeds, Paddy fried into flour, Long pepper, Sandal wood, each ¾ Tolas.

Sugar, Honey and Lemon juice q. s.

Triturat into a soft syrup. Apply to the tongue as often as necessary.

33. For Rat bite.

The rat bite is considered as injurious to the health. Periodical troubles like Hectic fever, bloating of the body, numbness, anorexia, uneasy feelings, hazy vision appear during the time of new moon days, and gradually subside at other times.

Give internally the faecal matter of Black cat and palmyra palm jaggery equal parts, twice a day for 3 days consequtively. For 6 days, salt free diet. Give bath on the 7th day and then follow the usual diet. Say ½ drachm each.

In chronic cases, the treatment should be repeated in the above manner. Three times once in every month.

34. For Rabid dog bite.

Administer internally half a pint of the juice of solanum nigrum leaves (well grown plants) twice a day for 3 days. Salt free diet for 6 days. Bath and return to the normal diet from the 7th day.

Apply the paste of the same leaves to the bitten parts.

35. For Cat bite

Give internally half a drachm of the bark of Acalypha Indica triturated with 2 to 4 fluid ounces of cow's milk, twice a day, for 3 days--salt free diet for 6 days. Bath and usual food 7th day forwards.

Externally apply a paste made of the roots of Indigofera tinctoria, over the bitten parts.

36. A general treatment for all kinds of Snake bites.

Take enough of the fruits of nuxvomica, throw of the seeds, mix with sufficient quantity of margosa oil, boil to the constituency of a soft mass. Triturate well and preserve in wide mouthed bottle or jar.

Administer this wax internally in 2 to 5 grains dose only once.

Instil into the nostrils one or two drops of the following.

Take a few grain of copper sulphate, fold it in a piece of cloth, steep it in young male children's urine(not exeeding 8 or 9 years), and squeeze a few drops into each nostril.

Also apply a grain of the juice of the leaves of Aerna Lanata, as a collyrium with the finger into both the eyes of the patient.

Diet:—Boiled rice and hot water—salt free—until all the symptoms subside.

(2) For the particular kind of snake that appears finer than the earth worm and of glossly red colour. The symptoms are, itching sensation all over the body, urticarial rashes, uneasiness, biliousness; when once this fine snake bites, the symptoms recur during new moon days, if proper treatment is not given. In Tamil this variety of snake is called "Siru-Pambu".

Triturate the roots of gymnea sylvestre with hot water into a paste. Give this both morning and evening for three days consequtively in dose of ½ to 1 drachm.

Salt free diet for 6 days.

Give bath on the 7th day and add fried salt and tamarind to the diet.

37. Treatment for syphilitic buboes and chaneres.

Bulbous roots of Bryonia epigaea
(scraped of the external sheaths) 6 tolas.
Bulbous roots of Bryonia Rostrata 6 ,,

Plumbago Zeylanica root bark	3	,,
Hygrophila spinosa (whole plant)	6	,,

Cut the above into small pieces and bruise. Mix with

Gingelly oil	½ seer.
Castor oil	½ ,,
Litharge	108 grains

Boil until the sediments appear like sands. Decant the oil and add 6 tolas of sugar candy (powdered) Preserve in bottles.

Dose:— 2 to 4 fluid drachms.

Twice a day for 6 days.

Allowed Diet:—Boiled rice, Dhall, Salt, Cow's ghee and hot water.

All the rest should be avoided. Bath and change of diet on 7th day.

For oil bath—castor oil should be used every alternate day.

Ointment.

Ointment for syphilitic ulcers, Chancres, and incised buboes.

Cinnabar, Litharge Crude calomel, white Dammar, Terminalia chebula, Galls, Terminalia bellerica, Catechu, each 1 tola.

Butter 1 lb. Triturate well, steep in water for a day and then apply to parts.

38. Purgative—1

Dry ginger	3	Tolas.
Pepper	3	„
Long pepper	3	„
Cubebs	3	„
Embelia Ribes	3	„
Liquorice root	3	„
Cinnamomum Tamala	3	„
Cyperus Rotundus	6	„

Chebulic myrabolans (without seeds) 30 tolas.

Dry them in sun and finely powder the above in quantities noted. Mix well. Take one tola of this powder and mix with equal quantity of country sugar and mix with warm water and drink in the early morning.

A good purgative that will not produce griping, Vomiting and other troubles.

Increase the dose if the bowels are hard

39. Purgative—2.

Cocoanut rind juice 4 ounces, Momorica Muricata leaf juice. 1 ouncc.

Mix well and take in the morning; along with purgative action, the worms are expelled.

40. Purgative—3.

Dried senna leaves, dried Mrraya konigii leaves, equal parts, powder and mix well.

Take 20 to 40 grains at bed time. Removes constipation.

41. Purgative—4.

Take 2 seeds of Butea Frondosa and insert them in a mass of fresh buffalo's dung for a night, wash and remove the outer skin of the seeds, and triturate with cow's milk and take in the morning.

42. Combined anthelmintic or purgative.

Tender leaves of Cassia fistula, sufficient quantity to be placed on a linen and covered over a pot containing water and cover another pot over it. Boil the lower pot for an hour. The leaves will be steamed squeeze the juice of the leaves about 2 to 4 ounces and mix with it some sugar and take.

A safe purgative and anthelmintic for pregnant women and children.

43. *Oils.*

Cow's milk	½ measure.
Castor oil	¼ ,,
Root bark of Daemea Extensa	1 ounce.
Sesamum seeds	12 Tolas.

Triturate the last two with milk and mix with oil, boil until all traces of water evaporates, and place in it finely powdered Butea Frondosa seeds 4. Set aside for 5 days.

Dose:—½ to 2 Fluid Drachms.

Purgative and Anthelmintic.

44. *Another Oil.*

Castor oil	1 measure
Cow's milk	4 ,,
Liquorice root	1½ Tolas.
Rock Salt	1½ ,,
Chebulic Myrabolans	1½ ,,
Picrorrhiza Kurroa	1½ ,,
Purified croton seeds	1½ ,,

Triturate the last 5 ingredients with cow's milk and mix with oil, boil and decant the oil.

Dose:—1 to 4 fluid drachms.

A very useful purgative in all skin diseases like Eczema, Scabies, etc., and also in vayu and Pitta troubles.

45. *Lavana Ganthi oil.*

Cocoanut rind juice	1 measure
Panchalavana	7 Tolas
Trisara	3 ,,
Purified croton seeds	3 ,,
Castor Oil	½ measure

Boil until the sediments appear like coarse sand.

Dose:— 5 to 30 Minims hot water.

An excellant purgative in gastric troubles, Rheumatic and other pains and menstrual pains.

46. *Purgative* (external use)

Mercury	54 Grains.
Sulphur	54 ,,
Croton Seeds	324 ,,
Pulp of seeds of alangium Decapit	216 ,,
Borax	270 ,,
Castor oil seeds pulp	324 ,,
Pulp of seeds of Jatropha curcas	278 ,,

Fruit seeds of cassia Fistula 432 „
Chebulic myrabolans (free
from seeds) 324 „
Pulp of seeds of butea frondosa 3 tolas.

Triturate the above with the milk juice of Euphorobia Nerifolia for 3 days and insert them in a well ripe cocoanut (freed from water) and cork the hole with a stick, and place this cocoanut into a bag of paddy for 15 days and remove the shell of the cocoanut and triturate the whole like a jelly and apply this paste inside a brass vessel and place the vessel under very hot son. Oil will come out of the paste. Collect and store.

Apply 1 drop on the navel or apply the oil a few drops over jasamine flower or lime fruit and smell.

Acts as a powerful purgative.

To stop superpurgation, take cold bath or Rice and curd diet and apply sandal wood paste to abdomen.

47. Another Process.

Pulp seeds of Alangium decap 1 measure
Pulp seeds of croton 1 „

Triturate and boil and extract the oil. Apply the oil over red flowers oleander and

keep it in night dew. Be smelling the flower in the morning. Purges well.

The above diet and Sandal paste will stop the motion.

48. *Pills.*

(1) Picrorrhiza kurroa,

White flowered clitorea ternata root bark, Punernva root, Pepper, Long pepper, Borax, Ipomaea turpethum, Each 1 tola and 36 grains. Purified croton seeds 4 tolas and 36 grains.

Triturate with the juice of Hydrocotyle Asiatica, for 3 days into a pill mass and make 5 grains pills.

Dose:— 1 to 2 pills in fresh ginger juice, boiled hot water or jaggery.

(2) Poomani pills

Picrorrhiza kurroa	1 tola.
Flowers of Bassialongifolia	1 ,,
Purified croton seeds	2 ,,

Triturate with the juice of aloe root for 10 hours and make into 5 and 7 grain pills and dry under shade.

Dose:— 1 pill.

In fresh ginger juice boiled and honey for all kinds of fevers. In garlic oil in tri-doshas. In castor oil for all vayu rogas. With hot water a routine purgative.

49. *Meshugu or Jelly.*

(1) Pavala Kushambu

Cinnabar	2 tolas.
Borax	2 ,,
Pulp seeds castor	4 ,,
Purified croton seeds	8 ,,

Triturate well. Dose:— 5 to 10 grains with cold water increases the purgative action.

Hot water will stop the motion.

(2) Purified mercury	2 tolas.
, Croton seeds	1 ,,
Jaggery	2 ,,
Charcoal burnt of cocoanut shell	2 ,,

Triturate well for 24 hours with the milk juice of cocoanut rind.

Dose:— 5 to 10 grains in sugar.

Corrects tridoshas in Hiccough & fevers. A very good purgative.

50. *Aphrodosiac Remedies.*

(1) Mercury drawn from cinnabar	216 grains.
Cinnabar	68 ,,

Borax, Cloves, Cannabis Indica, Seeds of Drumstick, Nutmeg, Mace, Cyperus Pertenensis, Opium, Seeds of Muccenapruriens, Ipomoea digitata, Saraparuppu (Tamil).

Each 1½ tolas.

Powder the ingredients and fill in a water emptied cocoanut. cork, and apply over it cowdung, dry and burn with 10 cowdung cakes.

Throw off the burnt shells, and triturate for 7 hours finely with the juice of the flowers of Drumstick tree.

Make into 20 grain pills—dry.

1 pill mixed with milk and sugar before night meals.

Diet:--Rice, Milk, Sugar, and ghee.

A powerful aphrodosiac useful in spermatorrhea and impotency.

Other cheap and simple aphrodosiac drugs.

1. Sandal wood seeds, Strychnos potatorum seeds, Moringa petrogosperma seeds each ¼ tola. Triturate with ¼ measure of milk and take at bed time.

2. Mucuna pruriens seeds, Curculigo root, ipomoca digitata root each ¼ tola. Mix with milk ¼ measure as before.

3, Boil, in ¼ measure of milk, 1 tola each of the flowers of Moringa petrogosperma and Tribulus Terrestris.

Some external applications to stimulate the aphrodosiac action.

1. Take 10 grains of Pachakarpoor make into a paste with the fruit juice of Azima Terracantha and apply over the male organ daily at night.

2. Boil in 1 measure of pure cow's milk, 60 flowers of white calatropies Gigantia, until the flowers become spongy. Remove the flowers and take the milk, curdle, as per home process, churn and collect the butter. Wash the butter well with water 10 times add to it equal quantity of civet and bezoar.

Triturate well and preserve. Apply to the male organ every night.

51. Cholera and its Treatment.

1. Veera rasa Sinduram.

Rasa sindura 1 tola, Cinnabar 1 tola, Perchloride of mercury ½ tola and Silver nitrate ¼ tola.

Triturate well in a Mortar for ½ hour and place in hot sun for half an hour. Repeat this process 4 or 5 times and store.

Dose:— ½ to 1 grain. In fresh ginger juice or juice of flowers of leucas cephalotes.

In cold clammy perspiration, and when the extremities are cold, one or 2 doses may be repeated and then stopped.

2. Vishabedi Sangarani.

Perchloride of mercury, Nitre, Borax, Camphor, Ammon chloride. Alum each 1 tola, Cinnabar 4 tolas. Triturate well with honey into a pill mass and preserve in a phial.

Dose:— ¼ to 2 grains in honey,

If the medicine is vomited out, or if no effect is produced with the first dose, repeat 1 hours after. In 2 or 3 doses the effect will be known.

3. Kadikara Sinduram.

Rasa sindura 2 tolas, purified cinnabar 8 tolas and silver nitrate 1 tola. Triturate for 2 hours and place under hot sun for 2½ hours. Repeat 7 times. To be used after one month after preparing this.

Dose:—½ to 2 grains with equal quantity of camphor and honey.

4. Vishabedi Sanjeevi.

Take 120 tolas of the bark of tamarind tree, (after removing the irregular external parts) cut into small pieces and place as a heap in a corner, and sprinkle in the middle 3 tolas of camphor and ¾ tola of perchloride of mercury and set fire. After every thing is burnt into ashes, powder the entire ashes well and preserve.

Dose:— 1 to 2 grains in honey. Repeat every 2 hours as necessary.

Camphor and genuine musk in 1 grain doses may be added to any of the above preparation.

52. For Rickets in Children.

Juice of Asparagus Adscendens.

Goat's milk, Cocoanut rind milk, Cow's ghee each ¼ measure. Sugar candy 15 tolas.

Boil together until the water evaporates, strain and preserve. 1 Teaspoon twice a day with food, alone or with cow's milk.

An excellent nutritive tonic, Restorative, Palatable preparation for children, much superior to codliver oil, cures Phosphaturea.

For scurvy and scrofula and chronic eruptions of the skin of unknown origin (like urticarial rash) Gout, Myalgia and chronic Rheumatism and arthritis.

Gingelly oil	½ measure.
Cow's ghee	½ ,,

And take 3 tolas of the root bark of Plumbago Zeylanica. Triturate with water into a paste and mix with the above. Boil until the sediments becomes waxy, strain and preserve.

1 teaspoon in warm cow's milk or alone, once a day for 48 days.

53. *Smoke for all kinds of Head aches.*

Asafoetida, Ajowan, Dried ginger, Frankinsence, Pepper, Ammon chloride, Alpina coinensis, inner pulp of caesalpinia bonducella, Cumin seeds, cinnabar, Equal parts.

To be triturated with the milk of calatropis gigantea and applied to the surface of a linen, and rolled into wicks. Dry snd preserve. Burn like a wick and inhale the smoke.

54. An Electuary for all kinds of Cough.

Juice of:—Eclipta erecta and Prostrata, Fruits of Azima Tetracantha. Each 1 measure.

Pure honey	½	„
Cow's ghee	¼	„

Roasted and finely powdered:— Long pepper, Pepper, Dried ginger, Alpina chinensis, Ghebultc myrabolam, Each 1½ tolas.

Boil to the constitucncy of a thick paste. 1 Teaspoon plain or with milk, twice a day.

55. Tooth powder.

Nutmeg	1½	tolas.
Alum	1½	„
Camphor	1½	„
Common Salt	3	„
Burnt charcoal of the barks of Acacia Arabica	15	„
Burnt charcoal of Almond nut shells	7½	„
Powdered bark of mimusops Elengi	15	„
Roasted Kalnaar (asbestos)	15	„

Finely triturate in a stone mortar. An excellent tooth powder in Pyorrhea alveolaris and prevents any affections of the gum or teeth

decay. As a daily cleaning of the teeth, this is a very good tooth powder.

56. *Another tooth powder.*

Gommon salt	15 tolas.
White flowers of calatropis Gigantia	15 ,,

Triturate well and make into lozenge dry. Place it between 10 cowdung cakes and burn; finely powder and mix with it powdered dried bark of acacia arebica 30 tolas, Triturate well and preserve.

A powerful bactericide in Pyorrheca alveolaris, and all sorts of neuralgic pains of the gums and prevents decay.

57. *For skin disease.*

Chronic—that which looks like the skin of elephant and scaly.

Take the seeds of cassia tora, seeds of chalmoogra, grind well with butter milk and apply all over the part, dry and bathe after 3 or 4 hours. An excellent remedy.

CHAPTER XXII.

Dieto—Therapy.

One of the most unique features of the treatment according to this system is the great emphasis laid on the importance of diet. That diet plays a prominent part in assisting the recuperative process and helping the curing of the maladies is universally enjoined. The special feature is the intimate knowledge and accurate description to the minute details of forms and matter displayed in the injnctions laid down. The body subject to the laws of the three doshas responds as a natural law to the excitatory processes caused by the digestion and assimilation of different kinds of food stuffs cooked in various forms, mixed in certain proportions, containing as they do, qualities of Vatha, Pitha, and Kapha. The correction of doshas and the restoration of their equillibrium to enable the engines of the human body to function effectively and normally being the main aim of treatment, care should be taken to prescribe from time to time the suitable diets in relation to the diseases and in respect of the medicines administered, even the latter being

the potential forms of the energy of the three dathus. This forms a separate science in itself and here will be indicated a few special forms of the diet The special diet to be observed during treatment is commonly called the system of Pathiam, the expression being known to all the Tamilians.

1. Salt free. (Strictest)

By means of this diet, the protoplasm charged with the toxic properties and carried along the system, will be destroyed by the Katabolic action and the seventh tissue, the semen-seed, will be sterilized. Thus, this helps the radical cure of the disease.

Commonly observed in Albuminurea, Jandice, Dropsy, Rheumatism, Syphilis etc,

Cook the rice in a new clay pot, mix with boiled water and use. Avoid all other articles of food and vessels including the very flavour of Tamarind and salt and their very touch. Drink boiled water.

(a) Follow the diet for the prescribed number days.

(b) Bathe in warm water after applying a paste of Ajowan seeds and cow's milk, boiled and applied to the Scalp.

(c) After bath, use fried salt and roasted tamarind for preparations.

(d) Avoid gingelly oil, mustard and Black gram for another week.

(e) Return to normal diet by gradual stages.

2. *Icha--Pathiam.* (Slightly regulated diet)

Avoid:---Biller gourd (momordica charanta), mangoes, Brinjals, Guarbeans, Pumpkin, Agati Grandiflora, Indigestable articles, mustard, Sesamum, Bengal gram, cocoanuts, jack fruits, asafoetida, garlic, tobacco, toddy, intoxicating liquors, narcotic drugs and sexul intercourse.

Allowed: --Rice cooked in a new clay pot, tender brinjals, Drum sticks, Angular gourd (Luffa Acutangual,) salt, Tamarind, Dhall, pepper, cow's butter-milk, and ghee.

3. Diet, after medicated oil baths.

Avoid:—Sour butter-milk and curds, milk, bitter gourd, Greens, Fish, mutton, Agati Grandiflora, Tobacco, sleeping in day time Sexual intercourse and other excitements.

4. Diet while taking mercurial preparations.

Avoid:—Fishes, salt, oils, bitter acid and sour articles, indigestable articles, indigestable foods, and articles that will induce cold or heat.

5. Diet while using Iron preparations.

Avoid:—Pumpkins, Horse gram, mustard, Bamboo rice, Brinjals, Tobacco, cannabis sativa, opium, and sexual intercourse.

Use:— cows' milk, and less of Tamarind and salts.

6. Diet for copper preparations.

The preparations of copper are supposed to correspond with great fire, and hence no restriction of diet is necessary. Yet certain restrictions are advantageous.

Avoid:— Acid or sour articles especially sour curds and butter-milk, flesh of hare, lemon fruits, vinegar, Phyllanthus Emblica.

Allowed:— Jack fruit, plantain fruits, cow's ghee and milk, and sugar.

7. Diet while taking preparations containing smilax Chinnsis.

Avoid:— Turmeric, Gingelly oil, Areca nut, mutton, Pungent articles, Ginger, mustard, bitter, sour, acid and saltish articles, Bat, and fishes.

8. In Pills.

Sansevicria Zeylanica, Trianthema Decandra, Typhonuim orixense, vitis quadrangularis, Amorphanthus Campanulatus, Plumbago Zeylanica, Adenema Hissopifolia, cissus carnosa, colocasia macrosshiza.

9. General.

The following should be excluded in every kind of disease, as a matter of general principle.

Tender cocoanuts, cocoanuts, cccoanut oil, and its milk. Toddy, vinegar, mustard, bulbous roots, colocynth, horse gram, Kales root, tentils, fruits, biller gourd, tobacco, tamarind, mangoes, Asafoetida, pomegranates, cakes made of starch, ripe beans, sweet potato. onions, alcohol, crane, pig, and fishes.

10. Articles of diet useful for patients.

Allowed: – Rice is the staple food of the Indians. The other grains such as the great and small millets, bulrush millets—the cheap varieties used commonly by the poor-class, are to be avoided.

Eleusine coracana, washed and powdered as flour may be used as conjee.

Rice is the easily digestable food and it is preferred in all cases.

The following pickles are allowed:—

Lime fruits, carissa spinarum, solanum verbasifolunin and Tribolatum, Strychnos potatorum, citrus vulgaris, Phyllanthus Emblica, pavetta indica.

The following dried fruits or berries may be used in various preparations, such as, frying with ghee or boiled in puddings.

Carissa spinarum, coccinia Indica, solanum verbasifolium and Tribolactum, Plantains, Sabre bean (Dolichos bablab)

Mutton of the following are allowed:—

Common snipe, varamus Bengalinsis, House sparrow, Turnix taigoor, Indian Partridge, Deer, Rabbit, Goat, White rat.

Dried fishes allowed:—

Herring, Turtle, Whiting, Ophicephalus punctatus, Macromes vittatus, Shrimp, Sword fish, Orygon seption, Sparat, Smooth hound, Prawn.

11. The follcwing articles will constipate the bowels and are allowed in sprue, diarrhea and dysenteries.

Tender and fresh berries of Plantains and fiscus Glomerata, Passer Indicus; Turnix taigoor; Indian Partridge; Varamue Bengalensis; Hare; the dired fishes found in the tanks.

Note.--Raw and fresh fishes will endanger the life of such patients, if taken

12. The following will move the bowels and are indicated in cases of constipation,

Pumdkins, Vikna catiang. Agati Grandiflora, Brinjals and fresh fishes.

Appliances.

Figure 1.



Figure 2.

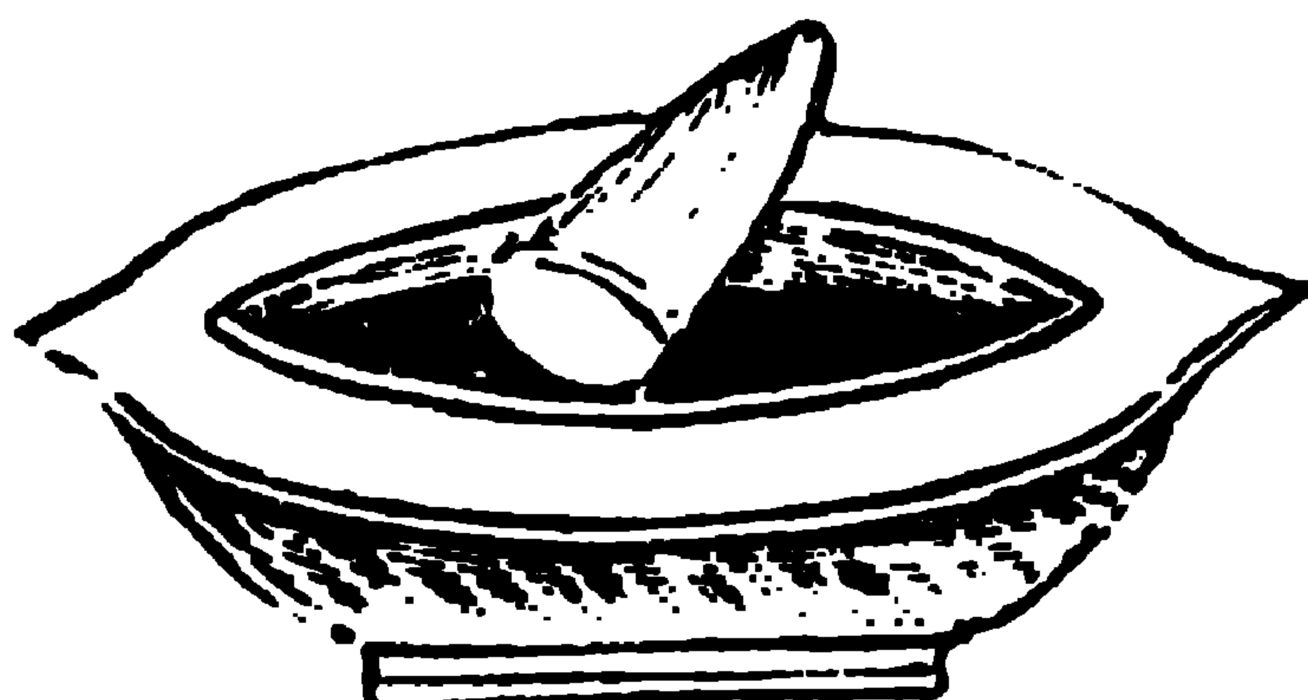


Figure 3.



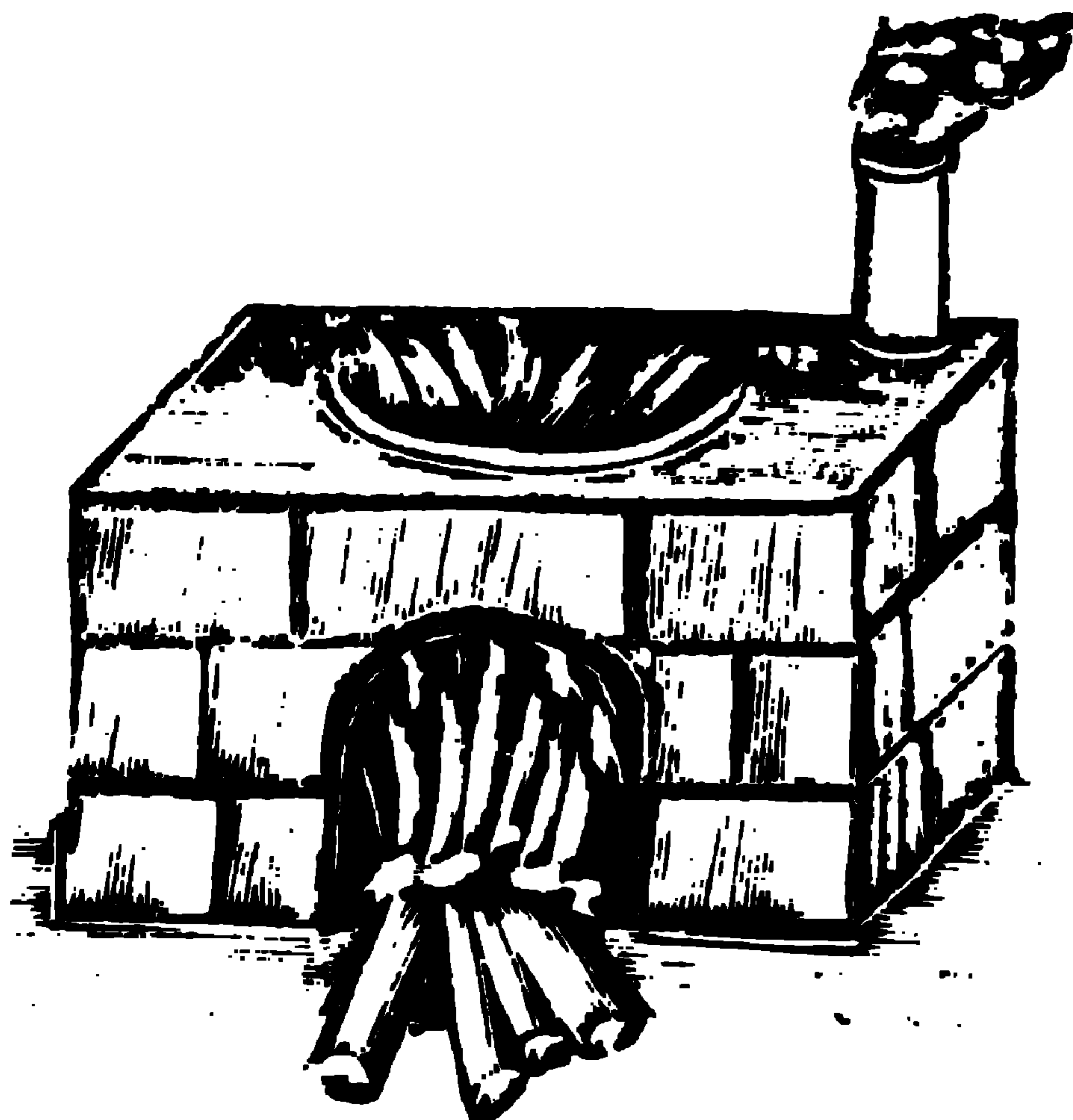


Figure 4 & 5.



Figure 6.

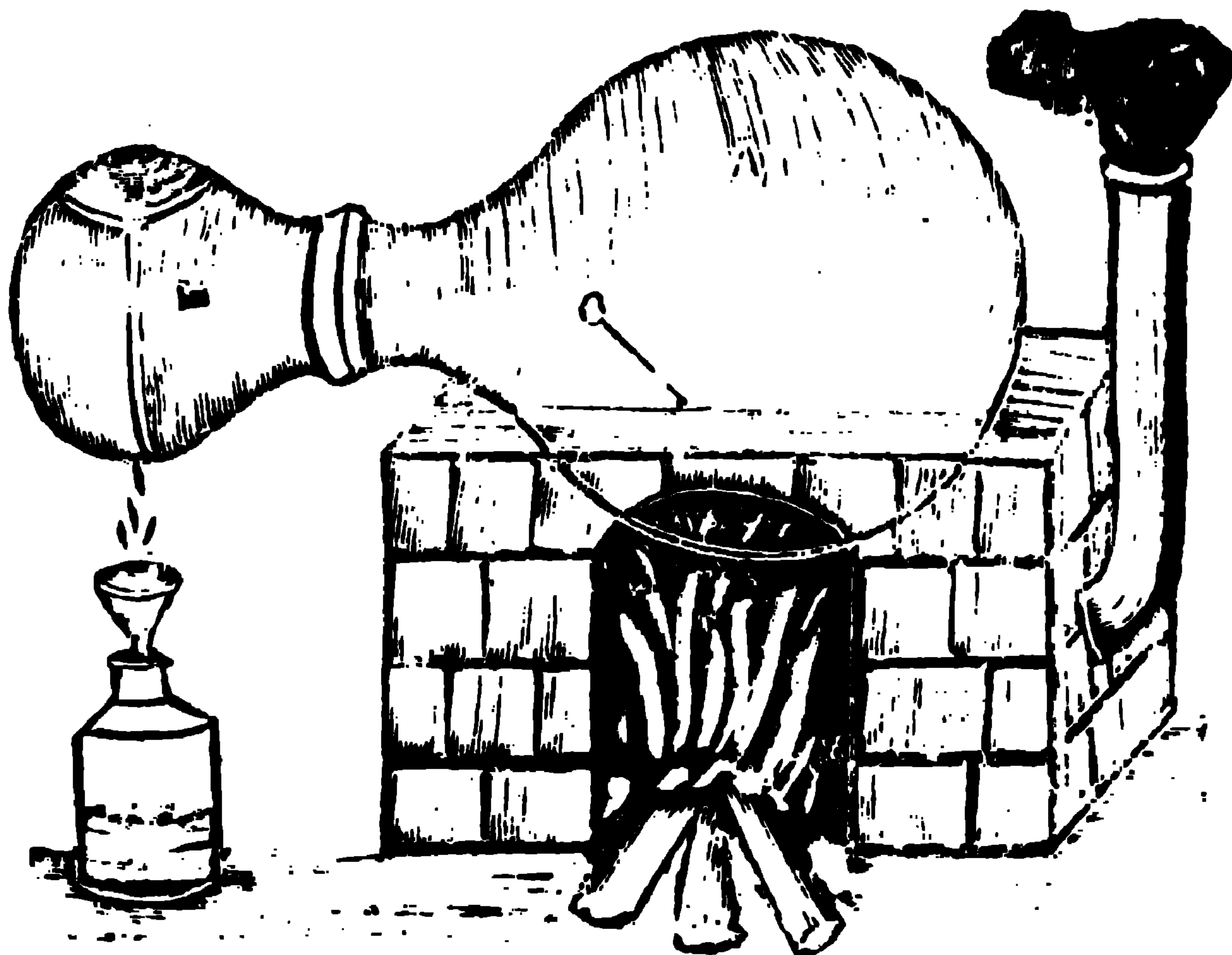


Figure 7.

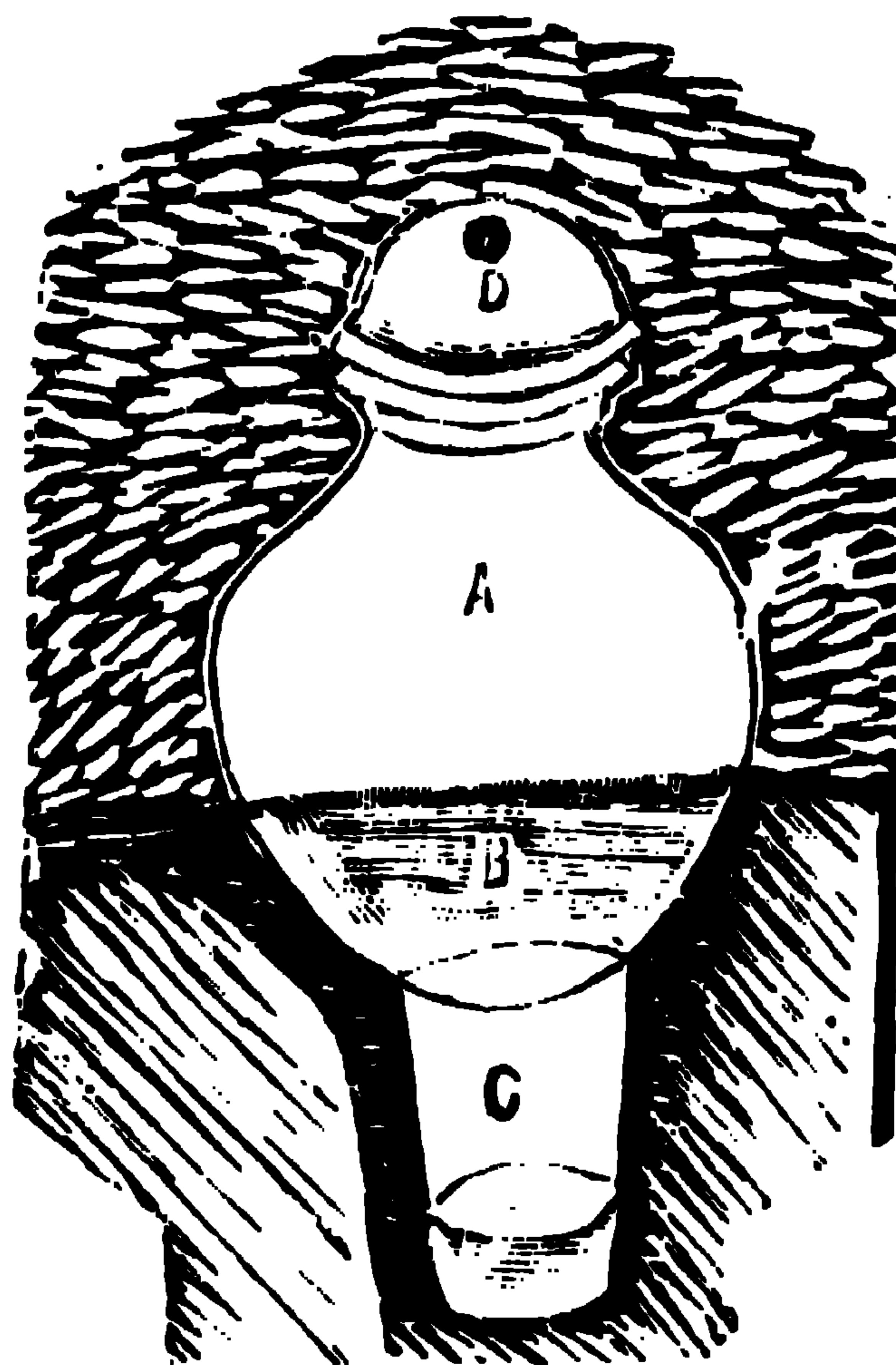


Figure 8.

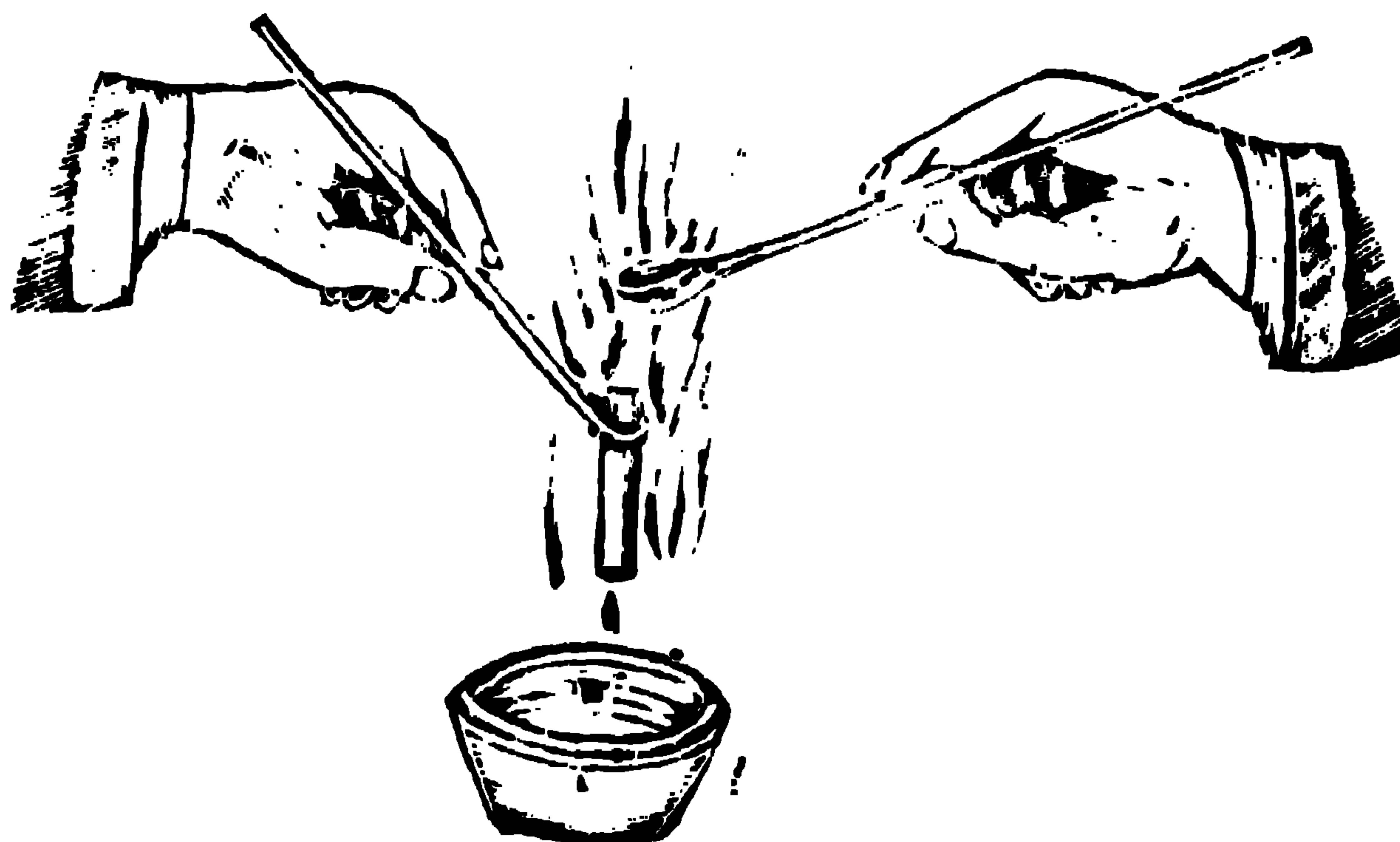


Figure 9.

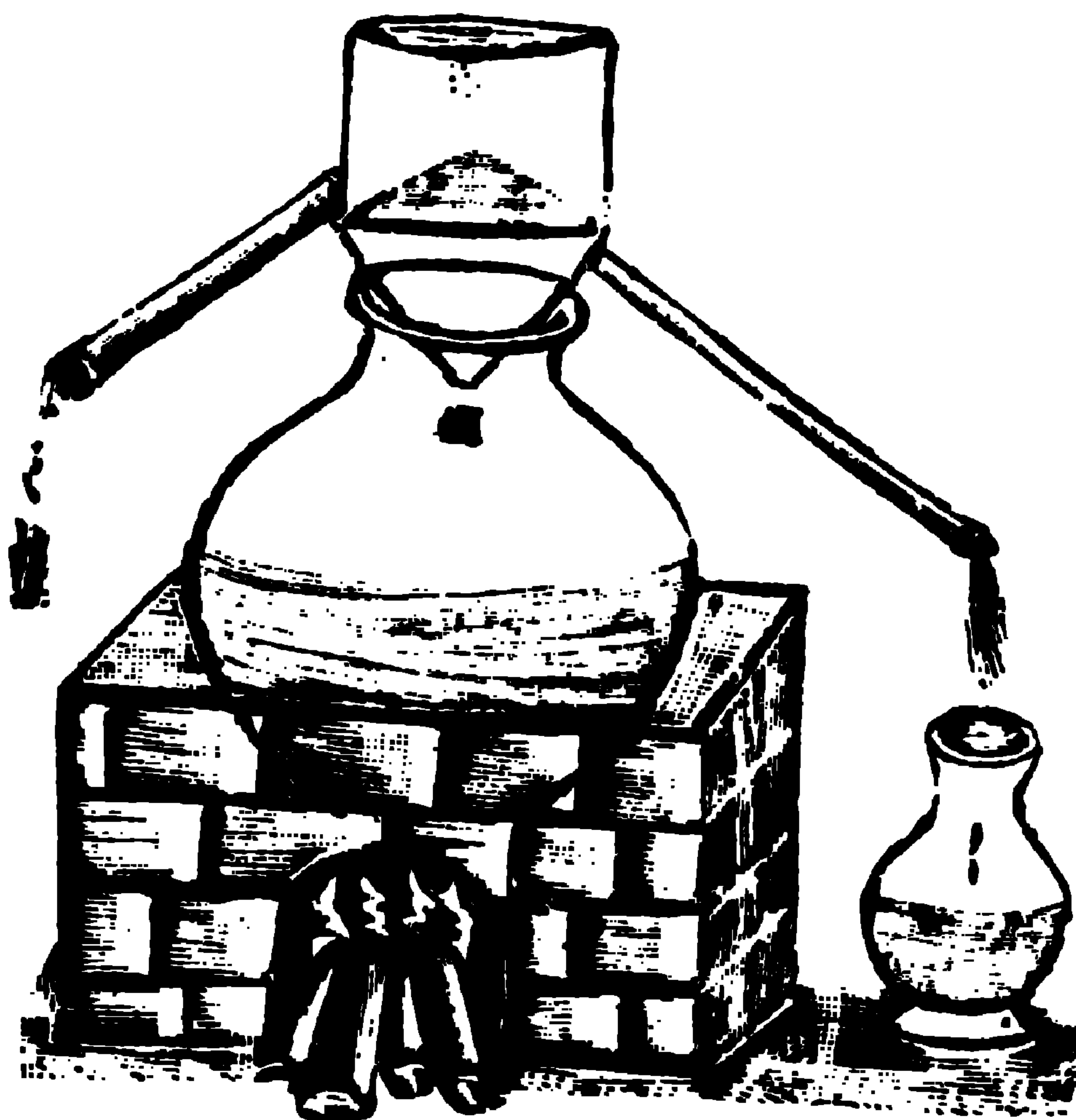


Figure 10.

Like the small pan in Figure 4.

Figure 11.

As in Figure 3.

Figure 12.

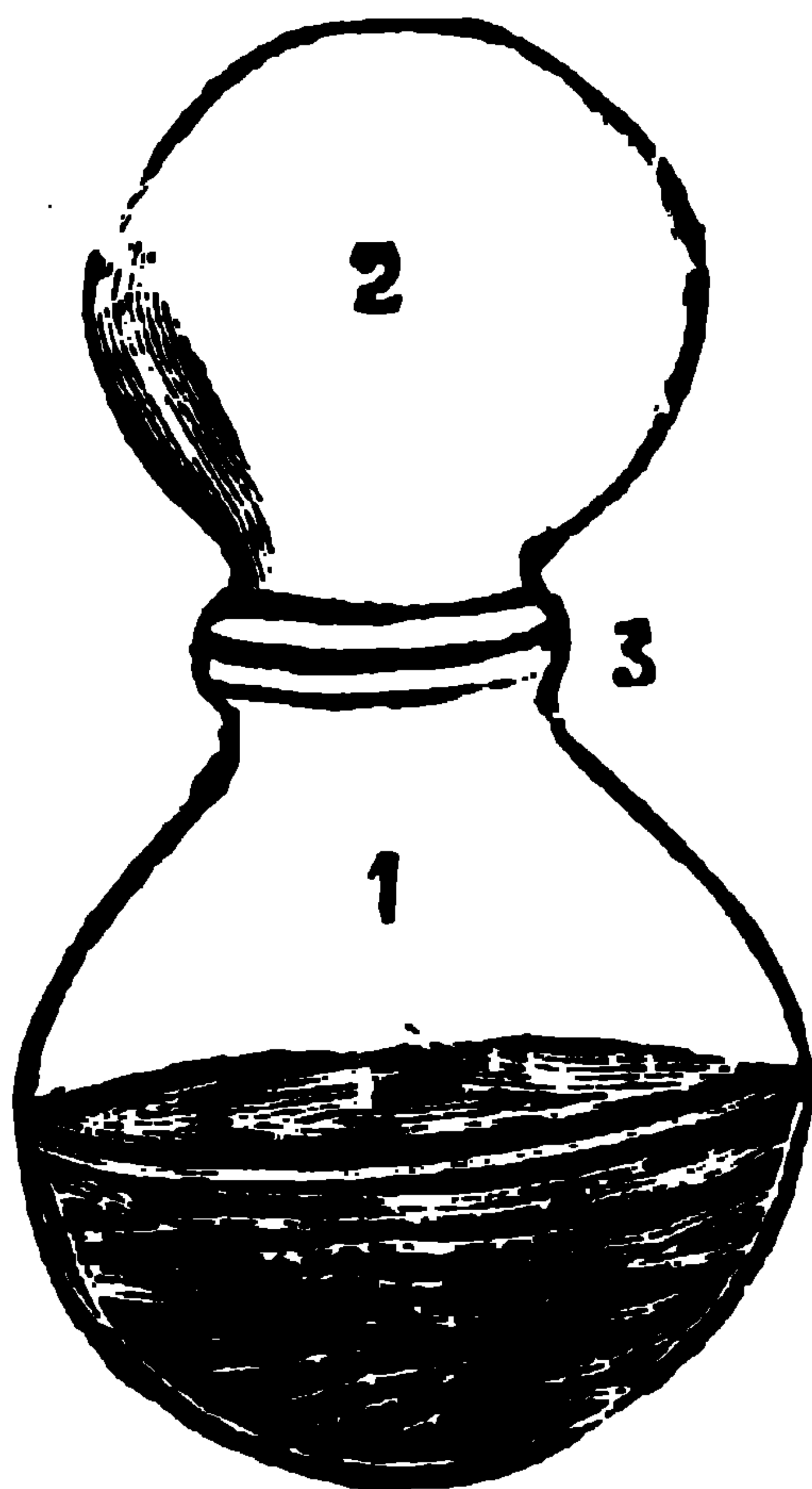


Figure 13.

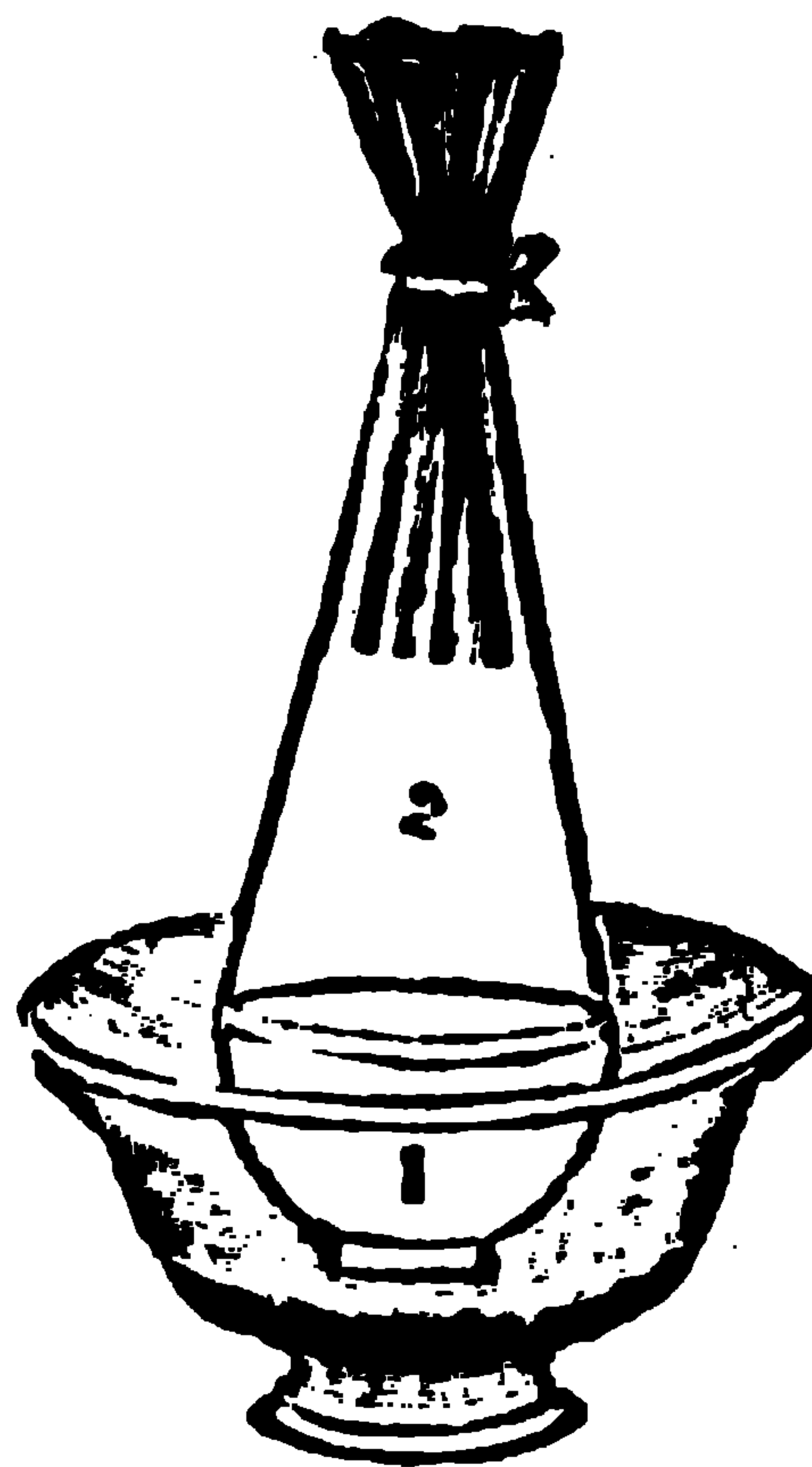
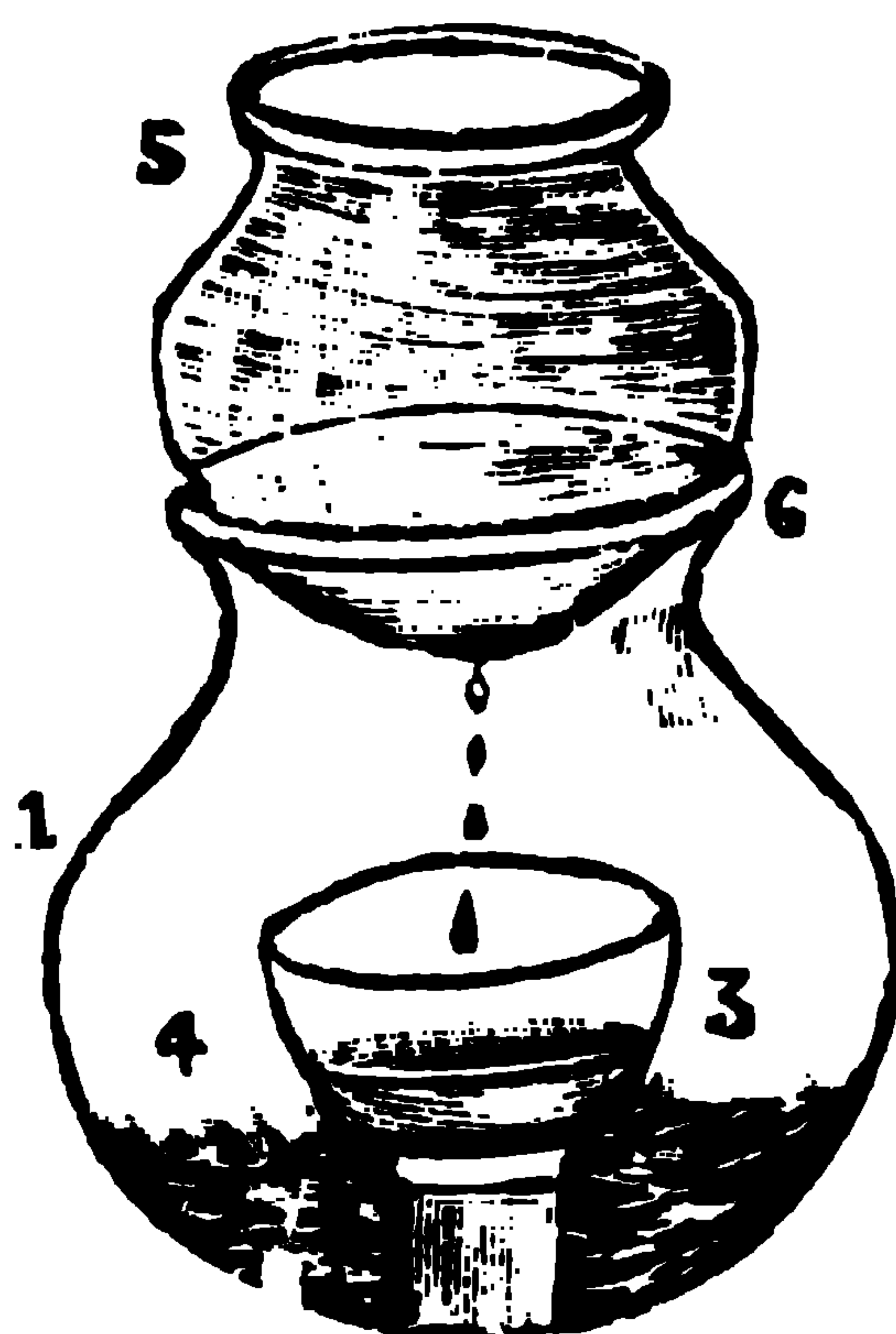


Figure 14.



INDEX.

Tamil.	*Sanskrit.*	*Latin or English*
Aal, Alamaram	Vata-Vriksha	Ficus Indica. Banyan tree
Aavaarai	....	Cassia auriculata. Tanner's bark
Adathodai	Vasa	Adatoda Vasika.
Adhandai Ka-thotti	....	Capparis Horida.
		,, Zeylanica
Adutheendapalai.	Gridhrani.	Aristolochia Bracteata.
Agathi.	Agasti	Agatia Grandiflora.
Akirakaram	Akarakarava	Anacyclus Pyrethrum.
		Pyrethri Radix
Ammanpacharisi	Raktavindu chada	Euphorbia Pilulifera
Amukara.	Aswaganda.	Withania. Coagulans.
Anai Nerunji	....	Bedalium Murea
Anai-tippilai	Gajar pnali	Scindapsus Officinalis
Andara thamarai Akasa ,, Kuli ,,	Kumbhika.	Villarsia Indica,
		Pistia stratiotes.

Arasu	Pippala	Ficus Religiosa
Aruhu.	Dhuva	Cynodon Dactylon.
Ashunji.	Ankoera.	Alangium Decapitalum.
Aswaganthi.	Aswaganda.	Withania Somnifera.
Athi.	Andumbara.	Ficus Glamorato.
Athimaduram.	Madhuka.	Glycerrhiza Glabra.
Athividyam.	Ativisha.	Aconitum Hetrophyllum.
Avuri, Neeli, Neela Koshunji.	Neelini.	Indigo Tinctoria.
Boomi Sarkarai Kilang.	....	Maerna Arenaria.
Chemmulli	....	Barleria Ciliata (Roxb)
Cheruppadai, Cheruppadi	....	Glinus latoides (Linu)
		Coldenia procumbens.
Cheppu Nerunji	Vasuka	Indigofera Enneaphylla
Cheviyam	....	Pepper root
Chithamalli	Prasniparni	Uraria Lagopoides
Chithamutti	Bala	Pavania zeylanica
Chitharathai	Vacha	Alpinia chinensis
Devadharu.	Devadaru.	Pinus Deodara.

Dhrakshai.	Draksha.	Vitis Vinifera. (Grapes)
Easwaramuli, Perumarundu.	Ishwari.	Aristolochia Indica.
Eerulli, Eeravengayam	Palavdu	Allium Cepa (onions)
Elandai	Badari	Zizyphus jujuba
Elarise, Elam.	Ela.	Cardamom.
Elavamaram, Mullilavamaram	Shalmali	Bombax Malabaricum
Eli-amanaku.	....	Sebastiania Chamaelea(Muller)
Ellu	Tila	Sesamum Indicum(Gingelly)
Elumichai	Jambira	Citras Bergamia (Lemon fruit)
Erashunji	....	Alangium Lamarckii
Erumuttai	Peenari	Anisomeles ovata (R.Br)
Eruku	Arka	Calotropis Gigentia
Etti	Vishamushti	Strychnos Nucis Vomica.
Ganja	Sidhpatri	Canuabis Sativa or Indica.
Gundumani	Gunja	Abrus Precatorius.
Iluppai	Madhuokah	Bassia Latifolia.
Inbural	Rajana	Oldenlandia Umbellata

Indu, Eaya-thandu.	....	Pisomia Aculiata.
Inji	Srangavera	Zingiberis (Fresh ginger)
Irangashunji.	...	Alangium Lamarcki.
Jathikai.	Jati-nibalam.	Myristica Fragrans.(Nutmeg)
Jathipathri.	Jadipatri.	Arillu of Nutmace.(Mace)
Kaalan.	....	Agaricus Campestris. Mush room.
Kadugu.	Rajika.	Mustard, Sinapis,
Kaduguroginí.	Katuka.	Picorrhiza Kurroa.
Kadukai.	Haritaki.	Terminalia Chebula.
Kadukaipoo,	Karkatashringi.	Rhus Succedanea.
Karisalanganni } Kaiyanthagarai. }	....	Eclipta Erecta } Eclipta prostrata } (Linu) (Flowers white—leaves thick. and dark.)
Sirukarisalanganni	....	Eclipta parviflora(flowers white—leaves smaller than the rest.)
Ponnanganni.	....	Alternanthera Sessilis. (Flowers white, leaves thin and slightly Yellowish.

Potralai Kyanthagarai, Manjal Karisilanganni.	....	Wedelia Calendulacea (Flowers) Yellowish leaves, thick and broader, erect shrub.)
Kakkattan.	....	Clitorea ternata (blue flower)
Kalianamurungai.	Parijataka.	Erythrina Indica.
Kalluruvi	Agnigarbe.	Ammonia Vesicatoria.
Kandangatri.	Nidegdhika.	Solanum Jacquini.
		,, Xanthocarpum.
Kandubarangi.	Bhargi.	Clerodendron Serratum.
Kanjankorai Naitulasi.	Gramya.	Ocimum Canum.
Karbogarisi.	Suganda kandak.	Psoralia Corylifolia.
Karpuravalli	Induparni.	Anisochilus Carnosum.
		Coleus Aromaticus.
Karunjeeragam.	Krishna Jeeraka.	Nigella Sativa.
Karunjembai.	Jayan[illegible]ka.	Sesbania aegyptiaca (Pers)
Karunavi.	Vatsanaba.	Aconitum Ferox.
Karunochi.	Krishna Nirgunda.	Justicca Gendarussa.
Karuntulasi.	Krishna Tulasi.	Ocimum Sanctum.
Karuvel.	Vabboola.	Acacia Arabica.

Karuveppilai.	Krishna Nimba.	Mrraya Konigii.
Kasagasa.	Kaskas.	Poppy seeds.
Kashachikai.	Kuberakshi.	Caesalpinia Bonducella seeds.
Kashuthai Tumbai.	....	Trichodesma Indicum.
Kasturi manjal, Nir Visham.	Daruhariq ..	Curcuma aromaticus. (Linu)
Kasukatti, Kathi Kambu.	Khadira.	Catechu.
Kattamanaku.	Kanana Eranda.	Jatropha Curcas,
Kattathipoo.	Phalgu.	Banhima Tomentosa. (flowers)
Kattu Jeeragam.	Somaraja.	Vernonia Anthalmintica seed.
Kattu Karunai.		Dracontum Polyphyllum.
Kattukodi.	Patalagarudi.	Cocculus Villosus.
Kattuvagai.	Sirisa.	Albizzia Lebbeck.Mimosa Sirisa.
Kichili Kilangu. Poolan Kilangu.	Krachura.	Curcuma Zedoaria.(Roxb).
Kiranthinayagam. Kudiyotti. Brahmathadu.	Brahmadandi	Argemone Mexicana. (Yellow thistle)
Kisha Nelli.	Bahupatra.	Phyllanthus Niruri.

Kodikalli.	Somalata.	Sarcostemma Brevistigma.
Kodiveli, Chithra mulam.	Chitraka.	Plumbago Zeylanica.
Konnai.	Rajavraksha.	Cassia Fistula.
Konji-Chedi.	....	Glycosmis Pentaphylla. (D. C.)
Koogaineer.	Tarakshiri.	Curcuma Angustifolia. (arrow root)
Korai kilangu, Muthakasu, Pathalamulam.	Mustaka.	Cyperus Rotundus.
Koshi Avarai.	....	Canavalia Ensiformis.
Koshi Keerai, Paruppu Keerai.	Loni.	Portulaca Oleracea.
Koshtam.	Pushkara	Aplotaxis Auriculata.
Kothamalli.	Dhanyak	Coriandri Fructus.
Kottai Karandhai.	Munditika.	Sphaeranthus Hirtus.
Kovai.	Tundika	Coccinia Indica.
Appakovai.	....	Bryonia Rostrata.
I-virali kovai.	....	Bryonia Laciniosa.

Kollankovai, Akasagerudan. Panangovai,	Mahamula	Corallocarpus epigeia. Bryonia Epigaca.
Korattai Ghowree.	..	Trichosanthes palmata. (Roxb)
Karkovai.	...	Bryonia umbellata.
Kudasapalai.	Kutaja.	Holarrhena antidysenterica.
Kurunja, Kashuthai palai,	Gandhana.	Asclepias Asthmatica.
Nanjaruppan, Nalpalai.		Tylophora ,,
Kuppaimeni, Poonai Vanangi.	Aritamanjarie.	Acalypha Indica.
Kurasani Omam.	Parasi Kayamam.	Hyocyamus Niger.
Lavangam.	Lavanga.	Myrtus Caryophyllus (Cloves).
Lavang pathri.	Gudetvak pathra.	Cinnamon Tamala(leaves).
Lavangapattai.	Gudetvak.	Cinnamon bark.
Machikai.	Majuphala.	Quercus Infectoria. (Galls)
Madhalai.	Ladima.	Punica Granatum. (Pomegranates)

Madhana kameswara.	....	Cycas revoluta (Linu)
Magish.	Bakula.	Mimusops Elengi.
Malai-kiluvai.	....	Protium pubescens (Wet. a.)
Malai thangi, Vatta thiruppi.	Pranijivaka.	Sida Acuta.
Malai Vembu.	Mohanimba.	Melia Azedarach.
Manatakali, Sukitti.	Kakamachai.	Solanum Nigrum.
Manipungan maram.	....	Sapindus Emarginatus. (Vahl)
Manja chemmulli.	....	Barleria prionitis.
Manjal.	Haridra.	Curcuma longa. (Turmeric)
Manjishi,(chevvalli.)	Manjista.	Rubia Cordifolia.
Mara manjal.	Daru Haridra.	Coscinium Fenestratum.
Marukarai chedi.	....	Randia Longispina (D. C.)
		,, Dementorum. (Lam)
Marul-oomathai.	...	Xanthium Indicum. (Roxb)
Marudha maram.	Arjuna.	Terminalia Arjuna.
Marul-Kilang.	Muruva.	Sansevieria Zeylanica.
Maruthondri, Maruthani.	Mendhi.	Lawsonia alba. (Henna)

Mavilinga maram.	Asmarighna.	Crataeva Religiosa.
Mayil konnai.	....	Poinciana pulcherrima. (Ser)
Mayirmanikam, Perunthuthi.	Nagabal .	Sida Rectusa or alba.
Merugankilang, Verugankilang.	Hascid carnid	Colocasia macrorrhiza. Alocasia Do (S-Lott)
Milagaranai.	Kanchana.	Toddalia Aculeata.
Milagu.	Maricham.	Piper Nigrum.
Moongil.	Vansa.	Bamboo.
Moongiluppu.	Vansalavanam.	Siliceous Concretion of Tabashir (bamboo)
Moosambaram, Sanninayagam, Kariapolam.	....	Extract of Aloes.
Mudakothan.	Jyotishmati.	Cardiospermum Halicacabum.
		Capparis Bisperma. (Roxb)
Mullangi.	Moolaka.	Raphanus Sativus.
Mulli, Kari-mulli.	Brahati.	Solanum Indicum.
Mullilavu.	Shalmali.	Bombax malabaricum.
Munnai	Agnimantha.	Premna Integrifolia

Murungai.	Shobhanjana	Moringa Pterygosperma
Musu Musukai.	....	Bryonia Scabrella. (Linu)
		Mukia Scabrella. (Arn)
		Trichosanthes Dioica. (Wall)
Muthiar koonthal.	Prasarani.	Paederia foetida.
Mysakhi-guggil.	Guggulu.	Balsamodendron Mukul.
Naga malli.	Yuthikaparni.	Rhinocanthus Communis.
Nagamalligai.	Kuchilata. (Hind)	Strychnos Colubrina.
Naga maram.	Rajaphala.	Eugenia Jambolanum.
Nagatali-Kalli.	....	Opuntia ferox. (Havv)
Nalpalai.	Moolinee.	Asclepias Asthmatica.
Nanangalli, Kanangalli, Ilaikalli, Manchevi kalli.	Snoohi.	Euphorbia Nivulia.
Nannari.	Anantamul.	Hemidesmus root.
		Indian Sarasaparille.
Naralai-Kodi.		Cissus pedata. (Lam)
		,, Lanceolata. (Roxb)
Nari-Vengayam.	....	Crinum revolutum. (Herb)

Naruvili.	Sleshmataka.	Cordia latifolia.
Nathai-choori.	Madanjhanta.	Spermacosae Hispida.
Nayuruvi, Sirukadaladi.	Apamarga.	Achyranthes aspera.
Nalla-Sangan-Chedi.	....	Azima Tetracantha.
Neela Chemmulli.	....	Barleria coerulea. (Roxb)
Neela-oomathai.	....	Datura Nilhumatu (Dun)
Neeradi-muthu.	Kushtuvairi.	Hydrocarpus Inebriens.
Neer-Brahmi.	Manduki.	Herpestis monniera.
Neer mulli.	Ikshuganda.	Hygrophila spinosa.
Neer Nochi.	Jalanirgundi.	Vitex Trifolia.
Neer-Poola.	....	Phyllanthus multiflorus.
Neer valam.	Jayapala.	Crotoa Tiglium.
Neichittie.	Sahadevi.	Vernonia Cinera.
Neithal.	Nilotpala.	Nympha lotus.
Nellikai.	Amalaka.	Phyllanthus Emblica.
Nenjaruppan, Vishakolli, Nai-palai, Pai-palai.	....	Tyophora Asthmatica. (Country Ipecane root)

Nerunji.	Gokshura.	Tribulus Larnuginosus.
Nila-Kadambu.	....	Justicia Accanlis. (Linu)
Nila-Kumish.	Biddarie.	Gmelina Parvifolia.
Nila-panangilang.	Musali.	Hypoxis orchioides.
Nilavembu.	Mahateeta.	Andrographis Paniculata.
Nilavirai, }	....	Cassia lanceolata.
Nila vagai. }		,, Elongata. (Linu)
		Senna Indica.
Nuna.	....	Morinda umbellata.
Nundhiavattai.	Nandivriksha.	Tabernae Montana Coronaria.
Odia maram.	Agashringi.	Odina wodier.
Omam.	Ajmada.	Ptychotis. Ajowan.
Oomathai.	Datura.	Datura alba (Nuz)
Maruloomathai.	Shanka-pushpi.	Xanthium Strumarium.
Ponnoomathai	....	Datura fastuosa (Linu)
Neela oomathai.	....	Datura Nilhumata (Dum)
Orilai Tamarai.	Ratnabrush.	Ioniduim Suffraticosa:
Ottarai.	....	Cob web. (Spider's Nest)
Pachilai.	....	Garcinia Xanthothymus.
Pagal Kombu-pagal.	....	Momordica Charanta (Linu)

Midhi pagal.	....	Momordica muricata (Welld)
Palu-pagal.	....	Momordica dioica (Roxb)
Pai-Peerku.	Katuki.	Luffa amara.
Pai-Pudal.	Patol.	Trichosanthes Cucumerina.
Pai-Surai.	....	Cucumis Trigonus.
Palam pasi.	....	Sidahumilis. (Willed)
Palmodha kilang.	Vidari.	Ipomoea Digitata.
Panai maram.	Tala.	Borassus Flabelliformis.
Parangipattai.	Chobachini.	Smilax Glabra orchinensis.
Paramutti.	Bala.	Pavania Odorata.
Pareecham.	Pinda kharjura.	Phoenix Dactylifera. (Dates)
Parpadagam.	Parpataka.	Mullago Cerviana.
Paruthi.	Karpas.	Gossypium Indicum.
Pasalai.	Palaka. (H)	Spinacea olaracea.
Pasu-munnai.	....	Premna integrifolia (Roxb)
Pathari.	Patali.	Stercospermum Suaveolens.
Pavala malligai.	Parijata.	Nyctanthes Arbor-Tristes.
Peetharogini.	Trayamana.	Thalictrum Foliolosum.
Perarathai, Thumbrashtagam.	Dhumparastma.	Alpinia Galanga.

Perianangai.	....	Polygala telophioides. (Will)
Peria Thagarai.	Kasamarda.	Cassia Sophera.
Peru-nari-Vengaram.	....	Crinum asiaticum (Herb)
Perundhuthi.	Atibala.	Abutilon Indicum.
Perunerunji, Yanainerunji.	Gajadaunstree.	Pedaluim Murex.
Perungila-maram.	....	Carissa carandas (Lin)
Perungurumbai.	Murva.	Sanseviera Zeylanica.
Perumaram.	Atarusha.	Ailanthus Excelsa.
Pichi.	....	Fabina Imbricata.
Pirandai.	Vajrivalli.	Vitex Quadrangularis.
Podulliaiai.	Vashira.	Lipia Nodiflora.
Pon-musuttai.	Lagupatha.	Cissampelos Pereira.
Ponnangottai, Poovandikottai, Poochakai.	Arista.	Sapindus Trifoliatus. (Soap nut)
Ponnumattai.	....	Datura fastuosa (Linu)
Poonaikali, Poonai kanjori.	Atmagupta.	Mucuna pruriens.
Poovarasu.	Parisa.	Thespesia Populnea.

Pulia maram.	Amlavraksha.	Tamarindus Indicus.
Puliampirandai.	Harwal (H)	Vitis setosa.
Pulichakeerai.	....	Hibiscus Cannabinus.
Puli-naralai.	....	Cissus Carnosa (Roxb)
Pulithadiki-Kodi.	....	Caesalpinia paniculate (Roxb)
		,, Sepiaria (Roxb)
Puliyarai.	Changeri.	Oxalis Corniculata.
Pullamanaku, Neerpanai.	....	Melanthium Indicum (Linu)
Punali-Kodi.	....	Bracly pterum Scandens. (Benth)
Punga maram.	Karanja.	Pongamia Glabra.
Punnai.	Punnagam.	Calophyllum Inophyllum.
Punnakupoodu.	....	Melochia Corchorifolia.
		Riedlea ,, (D. C.)
Purasu, Murrukku, Palasu.	Palash.	Butea Frondosa.
Ravel Chinni.	Bangla-Revachini.	Rhei Rodix.
Sadamanjil, Perungorai.	Jatamansi.	Nardostachus Jatamansi.

Sadamanjil, Perungorai.	Jatamansi.	Nardostachus.
Sadhakuppai.	Satapushpi.	Peucedanum Graveolens.
Sagastra Vedhi.	....	A kind of ore?
Salamisiri,	....	Orchis mascula.
Sandanam,	Chandana.	Sandal wood.
Sanganguppi,	Kundali.	Clerodendran inerme.
Peechangu,		
Peenarichangu.		
Sathi-Charanai.	....	Boerhavia repanda.
Sen-charanai.	....	Trianthema nonogyna.
Mookirathai saranai	....	Boerhaavia diffusa. (Linu)
Saranai.	....	Trianthema obcordatum (Roxb)
Vellai charanai.	....	Trianthema crystallinum (Vahl)
Siru Charanai.	....	Trianthema decandrum.
Sara kondrai Puli.	Suvarnaka.	Cassia Fistula pulpa.
Seemai agathi,	Dadrughna.	Cassia Alata.
Vandu kolli,		
Malai Tagarai.		
Seenthil.	Guduchi.	Tinospora Cordifolia.

Seera chengashuneer.	....	Conyza Cinera.
Seeragam.	Jeeraka	Cuminum cyminum.
Semparuthi.	Sona Karpasa.	Gossypium Purpurascens.
Sengashunir.	...	Nympha odorata.
Sengathari, Mayiladi kurundhu	....	False peacock's foot tree.
Serangottai,	Bhallataka.	Semicarpus anacardium.
Sevuru mullangi, Kattu mullangi, Narakarandhai.	Kukuradru.	Blumea Aurita.
Shanbagapoo.	Champaga.	Michelia Champaga.
Sheekay,	Saptata.	Acacia Concinna.
Sinni.	....	Acalypha fruticosa.
Sirianangai.	....	Polygala Glabra. (Rottl)
Siru amman pacharisi.	....	Euphorbia peltata. (Roxb)
Siru-cheruppadai.	....	Glinus dictamnoides. (Linu)
Siru-kanjori.	V ishi-kali.	Tragia involucratea.
Siru-kattukodi.	Patalagarudi.	Cocullus Villosus.
Siru-kurinjan.	Meshasringi.	Gymnea sylvetsre.

Siru-Nagapoo, Nageswaram.	Nagkesara.	Mesua Ferrea.
Siru-nari-vengaram.	....	Crinum superbum (Roxb)
Siru-Peelai.	....	Aerna Lanata.
Siru-thali-kodi.	....	Ipomaea coptica.
Siruthuthi.	Atibala.	Sida Rhomboidea.
Siru-vashuthunai.	....	Capparis pedunculosa.
Sithra paladai, Amman pacharisi.	Raktavindu chada.	Euphorbia Thymifolia.
Siva karanthai.	....	Sphaeranthus Amaranthoides.
Sivanarvembu.	....	Indigofera Asphalathoides.
Sivathai.	Trivrit.	Ipomaea Turpethum.
Sombu, Sohikeerai.	Shatapuspa.	Pimpinella Anisum.
Sothukattalai.	Kumari.	Aloe Indica.
Sukku.	Sunta, Nagara.	Dried ginger.
Thagarai.	Dadiamardana.	Cassia Tora.
Thalisapathri.	Talisapatra.	Flacourtia Cataphracta,
Thamarai.	Padma-kamala.	Nelumbium Speciosum. (Lotus)
Thanikia.	Vibhitaka.	Terminalia Bellerica.

Thannirvittan, Kalangu (Pappa kilangu)	Sathavari.	Asparagus Sarmentosus.
Thakkali.	....	Lycopersicum escule ntum.
Thashai.	Ketaki.	Pondanus odorotissimus.
Thashu thashai,	Agnimantha.	Clerodendron Phlomidis.
Thathari, Pushpam.	Dhataki.	Woodfordia floribunda.
Thavasu murungai.	....	Adatoda tranque bariensis.
Thera, Thura, Thira.	Kshetra parpati	Mullago Spergula.
Thel-Koduku.	Suryavarta.	Tiardium Indicum.
Thertan.	Kataka.	Strychnos Potatorum.
Thillai maram.	Ugaru.	Excoecaria Agallocha.
Thippili.	Dhataki.	Piper Longum.
Thippili Moolam, Naruku ,, Kandathipili, Thesavaram.	Pippali Moola.	Piper Dichotomum.
Thiruneethupachai.	Varavara.	Ocimum Basilicum.
Thoodhuvalai.	....	Solanum Tribolatum.
Thottal-Surungi.	Lajjalu.	Mimosa Pudica.

Thulasi.	Tulsi.	Ocimum Sanctum.
Thumbai.	Dronapushpi.	Leucus Cephalotes.
Usila maram, Oonjal.	Krishna Sirish.	Aibizzia amara, Mimosa ,,
Uthamani, Veliparuthi	Phala-antaka.	Daemia Extensa.
Vadha Narayanam maram.	....	Poinciana Gilliessii.
Vadumai.	Badam.	Prunus Amygdalus. (Almonds)
Vagai maram.	....	Albizzia Lebbek.
Vai Vilangam.	Vidanga.	Embelica Ribes.
Valai. (Vashai)	Kadali.	Musa Sapientum. Banana, Plantain.
Valamburikai.	....	Isora Corylifalia.
Vallarai.	Mandugaparani.	Hydroocotyle Asiatiea.
Valmilagu. Thakolum.	Sugandamaricha.	Cubebs.
Valuluvai arisi.	Adhi maricham.	Celestrius Paniculata.
Vanni maram.	....	Vachellia farnesiana. (Wet Ar)
Varapoola-Chedi.	....	Aerva Monsonia. (Mart)
Varikumatikai.	Indra varuni.	Citrullus colocynthidis.

Vasambu, Pullai-Valathi,	Vacha.	Acorus Calamus (Sweet flag).
Vedhuppadaki, Pai Verutti.	Ala moola.	Boehmeria irrusta (Linu),
		Anisomelos malabarica.
Velai;—Kollukai.	....	Tecoma capensies. (Lindl)
Nalla-velai.	....	Polanisia icosandra (Wet ar)
Nai. ,,	...	Gynandropsis Pentaphylla.
Muka. ,,	....	...phrosia purpurea (Pers)
Thai. ,,	....	Polanisia felina (D. C.)
Velathi-chedi.	....	Nicotiana macrophylla (Spreng)
Vellari.	Sakusa.	Cucumus Sativus.
Vellarugu.	....	Adenema Hissopifolia.
Vellai Kakkattan.	Ashpota.	Clitorea ternata varalbiflora.
Vellai-Nabhi, Kalapai-Kilang, Karthigai ,, Venthondri.	Agnisika.	Gloriosa Superba.
Vellai Nochi.	Nirgundi.	Vitex Negundu.
Vellai-poondu, Vellulli.	Lashuna.	Allium Sativum. (Garlic)

Velli-lodhram	Lodhra.	Symplocos Racemosa.
Vel-Naga-maram.	....	Anogeissus latifolius. (Wall)
Vendhayam.	Methi.	Trigonella foenum graecum.
Vengai.	Pitasala.	Pterocarpus marsupium.
Vengayam.	Palandu.	Allium Sepa. (Onion)
Ven-kadugu.	Siddhartha.	Brassica alba.
Ven-milagu.	....	Pimenta.
Veppamaram, Vembu.	Ravipriya.	Azadirachta Indica, Margosa tree; Neem tree.
Vetpalarisi.	'Hyamaraka	Wrightia Tinctora.
Petrilai, Vethilai.	Nagavalli.	Piper Betle. Chavica Betle. Betel leaves.
Vettiver.	Usheera.	Andropogen muricatus. (green)
Vidathala,	Virvriksha.	Mimosa Cinerea.
Vila.	Kapitha.	Feronia Elephantum.
Vilamichu.	Useera.	Andropogam muricatus.
Vilari, Virali.	....	Dodanaea burmaniana.
Vilumbi.	Bilimbi.	Averrhoe Bilimba.

Vilvam, Bilvam	Bilva.	Aegle marmelos. (Bael)
Visha Moongil.	Visha mandala.	Crinum asiaticum.
Vishnu kanthi.	Vishnu krantha.	Evolvulus Alsoinoides.
Vishuthi, Vilathi.		Cadaba Indica (Lam)

APPENDIX.

Author's contributions.

(*The Journal of Ayurveda, May,* 1926.)

Croton seeds in Siddha system.

Croton seeds,—Croton Tiglium—Jamalgota (Hind & Bomb.), Jaipal (Beng.), Nervalam (Tam.), Naypalam (Tel.), Neervaula (Mal.), Habitat—India, Ceylon, Indian Archipelago.

Identification of seeds:—They are oval or oblong, dark brown. marked with ramifications of the raphe. They resemble castor-oil seeds, which are brighter, polished and mottled.

Composition—(1) Glyceryl of drotonoleic acid, which appears to be the active principle, (2) Tiglic acid or Methyl crotonic acid, (3) crotonoe, which is non-purgative, but an irritant to the skin, (4) several volatile acids, to which the odour is due; (5) Several fatty acids.

The seeds of the following are stated to resemble those of croton tiglium in appearance and properties:—Baliospermum montanum. Vern. Danti. These are often sold as Jamal-

gota by druggists and croton oblongifolium—Baragach (Beng.) Ganasur (Bo.), Gonsurong (Goa).

Allopathy—Pharmacology—Croton oil is a powerful irritant to the skin,—a drastic purgative—due to its direct irritant effect on the stomach and intestines.

Therapeutics- Internally-croton oil is used only on rare occasions. As a purgative it is invaluable in cerebral haemorrhage, coma and insanity on account of its minute dose add the rapid and complete evacuation of the bowels which it causes. In obstinate constipation and intestinal obstruction from impacted faeces, Tape worms, Dropsy, Hydrocephalus, Uraemia, Delirium tremens, etc.

Antidote—In the case of an overdose of, or poisoning by, croton oil, wash out the stomach with gruel and mustard. or olive oil or diluted milk (4 oz. in 1 pint. of water), and give demulcent drink. such as linseed tea, milk whey, gruel, etc., opium internally or by enema, stimulants, etc. The only preparation for internal administration in allopathy is oleum crotonis the oil expressed from the seeds of croton tiglium and its dose is ½ to 1 minim.

Siddha system--Croton seeds occupy a very important place in Siddha System. The seeds undergo various processes of purification in this system and its irritating and poisonous effects are removed before its administration. It is found out in this system that the foliaceous cotyledons that lie between the two halves of the seeds are highly poisonous. This is carefully removed from each seed and purified as follows:—

First, the entire seed is boiled in Buffalo's dung and its urine. Then the inner seed is separated from its cover. Then the foliaceous cotyledons are carefully removed. Then boil in lime juice. After that in Vinegar. Then boil with rice and water just like cooking rice. Then dry them in shade. Then soak them in human milk for a day. Then dry again in shade. Lastly, fry them with a little ghee or castor oil and wipe off the oil or ghee adhered to the seeds before being added to the preparations. This is the common process of purification. There is another form, which is Sadhu Kriya, *i. e.*, after the 1st process of boiling in Buffalo's dung and urine and the removal of foliaceous cotyledons, the seeds

are triturated with lime juice into a paste and this paste is applied to the outer side of a new mud pot and kept in shade for 24 days. Then it is scraped off from the pot and added to the preparations.

Thus many of the poisonous acids are eliminated from the seeds, the active and useful principles of the seeds only are retained and thus made safe for internal administration.

This is the common purgative in this system, The minute dose is an advantage. Siddha system has many compound pills, pawders, oil and pigments out of these seeds in combination with many costly drugs, such as, musk, Gorochana, saffron, etc. These preparations not only produce copious watery motions but also arrest the complications in many serious diseases, and cure many diseases. In many instances, after giving this purgative, no further treatment will be required. Allopathy states the excellence of the raw oil alone in many serious cases as mentioned above. The purified seed is much more effective in very many such diseases, and more safe to use.

Some of the preparations contain carmintives, febrifugcs, hepatics, antilithics, Diuretics

antiperiodics, anthelmentics, expectorants, etc. By their judicial use and with different vehicles (anupans) all the above effects can be noticed. In many serious cases, the brain and nervous symptoms subside, temperature is reduced to normal in many specific fevers, when many cwts. of Ice has to be used constantly just to control the temparature. General pain, pain in the joints, in the muscles and even in the bone marrow, due to Syphilis or Rheumatism or for whatever cause will be relieved. Stomach and intestinal troubles pass off. Cuts short the duration of certain diseases. Some preparations are antidotes to many kinds of snake poisons and other poisonous insects, or animals. Croton preparations are not the mere flushing agents of the intestines. They expel from the system many a pathogenic organism, circulating in the blood, lodged in the liver, spleen or intestines that are the cause for many diseases. A microscopical examination of the blood, etc., before and after the administration will prove the efficiency of these preparations.

The virtues of the Croton seeds are.—

1. Properly purified seeds can be safely used as an ordinary purgative even to children.

2. Such seeds do not irritate any organ.
3. Proper dose does not produce super-purgation.
4. Super-purgation can be controlled by ordinary intestinal astringents.
5. Preparations made with such costly ingredients detailed above, enhance the curative action in many diseases.
6. Many alarming symptoms are controlled by a first dose of the compound croton seeds preparation.
7. The very small quantity of the medicine that is to be swallowed is appreciated by the adult and children alike.

I beg to detail below one of the preparations made with purified croton seeds add its innumerable uses with different vehicles (anupans), named after Agasthiyar.

AGASTHIAR KUSHAMBU.

Process.

Asafetida, Rock (salt), Pierorrhiss Kurroa, Borax. Nigilla Sativa, Long pepper, Purified Mercury, Purified Aconite root, Purified Red arsenic, (Harithala) Yellow orpiment. Each of the above, 1 Drachm.

Purified Croton seeds 3 Tolas.

The inner substance of Jatropha curcas. 1½ Tolas.

Triturate together until it becomes a fine thick paste. Some say this is to be triturated with the lime juice for about 12 hours.

Preserve in boxes made of horn.

Dose:–Tamil–Panavidai–8 grains for adult.

Diseases & *Vehicles.*

1. Fever with shivering, Sanni, fever due to Vadha Dosha. orchitis. Vayu and Moola Vayu—Boiled fresh ginger juice or in decoction of dried ginger.
2. Cough.—Chebulic myrobolans.
3. Fever due to Pitta dosha—Decoction of myrobolans.
4. Fever due to Kapha—Decoction of Long pepper.
5. Ordinary purgative—Decoction of cloves and sida acuta.
6. Fever with shivering—Decoction of dried ginger and pepper.
7. Bleeding piles—Cow's ghee.
8. Panduroga (Tamil) Pernicious anaemia? -Cow's milk.

9. Ascites, General dropsy, Dyspepsia—Pepper powder and Garlic.

10. Sannipada—Honey or fresh ginger juiee.

11. Vayu—Dried ginger, gendarussa vulgaris—decoction.

12. Stones in the bladder Kidneys and Urethritis—Juice of Sanjankuppi (tamil) or pepper, fried alum sugar candy, all powdered together and made into a paste with ghee or juice of tender gourd or tender cocoanut or vinegar (meant, cooked rice preserved in water for subsequent day's use in the mornings in South India—such water which is a few day's old is called Vinegar here).

13. 13 varieties of Sannipada—Oil of Garlic or decoction of Bryonia scabrella.

14. Diseases of the female generative organs—due to pregnancy—Tender leaves of Ficus Religiosa (the scared tree of India) made into a paste with cow's milk and made into the size of one arecanut, such 3 nuts, 1 once a day, for 3 days.

15. Diseases of the female generative organs due to menstrual disorders—Juice extracted from Jambul bark by crushing

with Goat's milk and powdered cumin-seeds added to it.

Or

the root of Gendarussa vulgaris, Pangampalai Ver (Tamil,) dried ginger, pepper, all together made into a decoction.

16. Diseases:—(Tamil) Ulkuthu and Pura veechu. Meant probably Tetanus.— Fresh ginger, Garlic, bark of Muringa Pterygosperma tree, Roots of Calatropis Euphorbia Terucalli, Butea tree, all these to be pounded and made into a decoction.

17. In heart diseases—Palmyra Jaggery, Plumbago Zeylanicum, both to be pounded and triturated with the juice of acalypha Indica and some honey added to it.

Or

Cloves, Bael leaves, leaves of cloves tree, Liquorice root, abies webbiana made into a decoction and butter added.

18. For Snake poisoning— Thali leavss (Tamil), Indigo leaves, tender leaves of Jambul, Pepper, Betal leaves and butter to be made into a paste and the size of an arecanut used.

19. For external use and internal administration in Scorpion sting— Garlic juice.

20. Bite of Vanalia (Tamil). Probably a variety of snake—Jaggery, Pugayooral (Tamil) and seeds of Luffa amara to be made into a paste with the juice of acalypha Indica to the size of an areaca-nut.

21. For Local inflammations and inflammations due to Sepsis—Boiled juice of Gendarussa vulgaris and mustard powder added.

22. Vomiting—Vinegar.

23. Dysentery due to piles, Pus in the womb, diseases due to pregnancy—Cow's milk or Goat's milk.

24. Bleeding piles—Cow's Ghee.

25. Ascites, Gleet—Juice of leaves of Ficus Glomerata.

26. Vayu doshas—Castor oil.

27. Orchitis—Juice of cocoanut pulp.

28. Fevers, Anda Vayu.(Tamil)—Palmyra Jaggery.

29. Pitta doshas—Cow's milk.

30. Sannipada 13—Decoction of five roots:—Hedysaeum Gangeticum, Doodia Lagopioides, Solanum Indicum, Solanum Xanthocarpum. Tribulus Lanugenoses.

31. Dyspepsia 8 kinds---Fresh ginger juice.

32. Thaapha Jwaram (Tamil) Perhaps Enteric? —Jaggery.

33. Rheumatic Fever- Juice of Gendarussa Vulgaris.

34. Fever due to Pitta dosha - Decoction of coriander.

35. Dysentery—Butter milk.

36. Syphilitic arthritis, etc.-Palmyra Jaggery

37. Menstrual disorder—Cow's curd.

38. Bilious complaint—Decoction of Kus-Kus.

39. To attain puberty---Sheep's milk or oil of Frankinsence

40. For various other diseases in general - - Dried ginger, Pepper, Long pepper.

41. Poisons. (Meant, snake or other venomous insects or animals)--Juice of betel leaf.

42. Fevers of all kinds Powdered Nutmeg.

43. For external use for Ulcers—Sesamum oil.

44. For all septic Ulcers---Sesamum and Neem-oil.

45. Abscess, Bubo, Carbuncles—Honey.

46. For severe head-ache—To be used as snuff mixed in human milk.

47. For inflammation (Local)—For external application in human milk.

48. For fainting, shock, etc.—Size of a mustard mixed in human milk and applied into the eyes.

49. For Palsy, Sannipada. Lockjaw, Snake poison, Head-ache. Fear of Ghost or Devil—To be applied to a cloth and made into a wick and burnt and the smoke to be inhaled.

50. Sannipada 13—In Neem-oil or decoction of dried ginger to be applied to the eyes.

Sannipada—Janni is a term in Tamil meaning Sannipada, widely used here.

* * * * *

II

(*The Journal of Ayurveda*, *October*, 1930.)

Septic cases.

There is the constant danger of neglecting to probe into the diagnosis and treatment of diseases in their initial stages. Trusting upon external appearances and relying on the formulae of accepted specifics we generally go on into a rut, irrespective of the justification of our diagnosis and prognosis of the cases until the issue turns graver and the situation appears too serious to admit of any rational treatment We are apt to lose sight of the convenient methods and aids which are easily accessible to us. The Vaccine treatment adopted in the western system for various forms of Septic conditions, the benefits arrived at from their use are still indefinite and uncertain. The common abscess due to pathogenic organisms are found every where in abundance. About 50 per pent or more of the surgical diseases treated in a mofusil hospital or dispensary may be under this common disease. Such abscess do not end with a single operation in a patient. In most of the cases the individual affected is in a depressed and unhealthy state

and the germical power of his tissue is always defective. In consequence of this state of health, a number of abscesses spring up in groups or one after another and takes years sometimes for all signs to subside, if no constitutional treatment is given. In the South Indian (Tamil-Sidha) system of treatment, for boils, abscesses, and carbuncles (Non-diabetic) the medicine called "Vipruthi Oil" is given internally. I append herewith the composition of the Oil. In the early stages, if the oil is administered, the inflammation disappears by surprise, the formation of pus is arrested and the tissues destroyed in unopened early stage of an abscess get absorbed. In a ripe abscess, the pus becomes sterile and the cavity shows already a granulating healthy wound which heal very soon.

There is a non-irritating antiseptic as well as aseptic decoction in the Sidha System which effects a cure very rapidly and cleans the septic and non septic wounds and ulcers. which contains no poisonous ingredients whereas a lotion prepared out of carbolic acid or Perchloride of mercury irritate the healthy tissues also and keeps the wound in a raw

state for a very long time. This kind of prolonged treatment costs a good lot on gauze, cotton and bandages. This simple lotion, rather decoction which contains the leaves of Margosa, Vadanarayan, Tamarind, Turmeric, Phyllanthus embellica, Galls, Terminalia chebula, and Thanikai, is a beautiful combination of antiseptics and astringents. The antiseptic action of Margosa has been extensively tried in various septic conditions including Puerperal Sepsis by the Calcutta Scholar and found very effective. It is a parasiticide as well. The fragrant Turmeric is a common toilet for Hindu ladies from time immemorial, used in daily bath on account of its virtue in Seborrhea, Parasitic skin diseases, profuse perspiration etc. and a deodorant. Vadanarayan (Tamil) is used as a poultice and by its application various inflammations subside. The idea of combining this leaf is to reduce the inflammation surrounding the area. The others possess astringent properties, which pervent oozing from the wound and contract the gap very soon. Four ounces each of these drugs are boiled in a gallon of water and reduced to $\frac{1}{8}$ gallon In this process of boiling all the germs or parasites that may be adhering to the drugs

and leaves and those that may be found in water will be surely destroyed so that the decoction becomes aseptic. This decoction is also useful to wash out the Vagina or Uterus in puerperal sepsis, Leucorrhoea or Gonorrhoea in women and for all inflammatory conditions as well. In discharges from the ear or nasal cavities and also to wash out the conjunctiva in eye diseases in place of Boric lotion or saline. In this connection, I wish to point out that according to western methods of preparing the lotion it is clearly stated by Rose and Carles that nearly all antiseptics are irritants and if applied in too concentrated a state or for too long may lower the local resistance and render the wound more liable to be infected by any organism that may at the time or subsequently gain accidental entrance. There is no such trouble with this lotion. The efficacy has been practically tested in my dispensary on about 1000 surgical operations performed and in about 20,000 surgical cases dressed in the course of two years. All the cases healed very quickly without any interruption. After washing with this lotion, a dressing called "Porai Ennai" is applied on the wound dipped in gauze and bandaged. The composition of

this oil I have detailed below. The peculiarity of this Oil is that when applied, whether a bandage is applied or not, no fly will come near for 24 hours together and sit on the wound while for this purpose any amount of sprinkling of Iodoform or Tar preparations will be of no use. The fly is one of the carriers of many infections and to prevent them from contaminating a raw surface is equally of value in treating surgical cases. Another important advantage of this Oil is that there is no necessity to frequently change the dressings in a bed case of septic wound, as this Oil possesses the virtue of keeping its antiseptic action for more than 12 hours. The continuous irrigation of septic cases with antiseptic lotions and the consequent posting of an attendant to regulate the flow of the fluid and the temperature of the lotion and such tedious processes are spared with this simple treatment. Any amount of neglect by the out-patients for ordinary ulcers in keeping the dressing properly does not affect in any way in getting it infected. Many a case of breast abscess in women that usually occurs soon after child birth gives a lot of trouble to the patient and the surgeon alike by forming pouches and collection of puss

indiscriminately which necessitates many openings and insertion of tubes, are mended by treating the constitution with Vipruthi Oil and dressing with Porai Ennai, only once a day, applied on syringing into the cavity after opening the abscess. The complicated and painful method of inserting a gauze or rubber drainage is completely replaced. The wound begins to heal from the bottom and does not burrow the healthy portions any further. In my dispensary, I had about 50 cases of breast abscesses, during the last two years of its existence and about half a dozen cases among them were complicated with fever, anaemia, multiple sinuses and threatening collapses. The wound was very pale and unhealthy with putrid discharge. All of them got all right under the system of treatment adopted by me as stated above.

There were two cases of Diabetic Gangrene of the foot Both albumen and sugar were present with a high specific gravity of 1040. The ulcer was smelling putrid - perhaps B. coli had entered. In the first instance these two patients consulted the allopathic surgeon, who advised them to have their legs amputated

immediately as sepsis would extend up to thigh and they would die of diabetic coma. But these patients as may seem natural were not willing to part with their legs. So, they consulted me as the next best. I immediately kept their legs in a warm decoction (Margosa etc.) bath and dressed them with Porai Ennai. Starved the patients for 24 hours allowing pure water to drink. The patients' temperature when seen first was 104 degrees F. The next day the temperature came down to 99 degrees F. Urine Sp. Gravity 1015. Traces of albumen and sugar. They were given reduced gold, mica, silver, and pearl in 1 grain doses twice a day in honey. On the third day the margins of the gangrene became well defined and the infection spreading up became arrested and the sloughs showed a tendency to separate. After dressing for a week all the sloughs came off without interference and a healthy cavity exposing the tendons of the feet became visible. Gradually the gap filled up wound contracted and an uninterrupted and uneventful recovery took place in a month. In one of these cases the infection began in the toe, which eventually turned dry and black, the so-called dry gangrens. As the patient did not like to remove

internally Panchabanam, Sandamarutham, Coral with arsenic—Vajrakandi pills-(the composition I give below)—act much better than the Vaccines and douches. I had to treat about a dozen of them in my dispensary and I am glad to note that all of them recovered. In one case, I had to request a lady doctor who examined the case. I note her opinion here. I had a doubt first whether it is a genuine case of sepsis or not. Subsequently I treated the patient as she refused to follow the advice of the allopathic treatment and principles, fearing that a douche might produce pus in the abdomen as is thought of by the lay public, ignorant of the process.

"Dear Doctor, the patient is having a septic fever. Temperature 103° F., no discharge from the uterus. The uterus is not contracted well. The cervix is ulcerated. She needs an injection and douche for a week. Mixture—If you give Ergot and Quinine, it is good."

Yours sincerely,
(Sd) A. D. R. (Lady Doctor.)

The patient is all right without a douche or injection and a nauseating dose of Quinine.

Our ancients in India have invented such medicines to combat the septic cases without the trouble of possessing an elaborate and costly laboratory to manufacture Vaccines and highly technical method of injecting them. I say the injection is highly technical because of the unfortunate Mysore P. W. D. Engineer's case as an instance of recent proof. It is universally accepted by the modern scientists that an autogenous-vaccine is superior to stock Vaccines. The idea underlying the Vaccine therapy is to train the body to stand the strain of a specific disease and to overcome the toxic effects and thus create immunity. The same results are produced by administering medicines by mouth in our ancient Indian Science, without any complicated method of treatment. The treatment with "Vipruthi Oil" for multiple abscesses is an example for auto therapy in Indian medicine. In preparing an auto-Vaccine we require an expert Bacteriologist in the first instance, a costly laborartoy, a discharge or pus from the patient's own body, culture with various agars, microscopes, standardisation of dose etc. according to western methods. Here you give a specific and immunise the patient. These medicines are prophylactic and curative.

How simple the method is! Any ordinary medical men, without high academical qualifications or specialities, can go on with such simple methods and we can effect a large savings of the funds.

So, there are many wonderful methods in the treatment of septic diseases in the Indigenous system that will serve the country in a very useful manner, if learned friends in the medical profession study them by practical application.

A study of the specifics and treatment prescribed in the Siddha system will be of paramount value and nothing will be so fruitful as to go into the unexplored lore of the medical genius of the glorious past.

The composition of various medicines detailed in the course of treatment for septic diseases:—

2. *Porai Ennai.* (Vide page 421)

3. *Decoction or Lotion.*

Margosa leaves, Tamarind leaves, Turmeric, Teminalia Chebula, Embelica officindis, Beleric Myrobolans, Galls,

Each 4 ounces

Water 1 gallon

Boil and reduce to $\frac{1}{8}$ gallon.

4. *Panchabana Sinduram.*

Perchloride of Mercury, Crude Colomel, Red Arsenic, Cinnabar, Sulphur, Each 1 tola

By a special chemical process these should be kept on fire till the water Is dried up.

Dose:— 1 to 3 grs,

5. *Vajrakandi Pills.*

Cinnabar	8 parts.
Crude Calomel	1 „
Perchloride of Mercury	$\frac{1}{8}$ „
Red Oxide of Mercury	2 „
Lemon-Juice	q. s.
Ginger-Juice	q. s.

Trituration and pills 3 grains size. 1 to 2 pills for a dose.

6. *Coral with arsenic.*

Coral	3 tolas
Purified White Arsenic	1½ „

To be placed in a covered curcible and burnt with cowdung cakes. Take out and grind with the milk of White Calatropis Gigantia, and make a circular cake—flat. Place in a covered crucible and burn with 10 cowdung cakes. Dose:—1 grain in honey.

Bright's Disease
(Nephritis)Chronic or Acute, Albuminuria.

(Practical Medicine, October 1932.)

The diagnosis of this disease is usually based on the presence of albumen in the urine and the exhibition of such symptoms as, severe headache, backache, puffiness of the face, and scanty urine The serious and alarming symptoms are, Eclampsia in pregnant women, uraemia. anasarca and vomiting.

Supposed Causes:—Due to the action of cold or of toxic agents upon the kidneys.

Prognosis:—Is extremely grave. In a case which has persisted for more than a year recovery rarely takes place.—*Osler*.

Treatment:- Sir William Osler opines as "For the persistent albuminuria, I agree with Roberts and Rosenstein that we have no remedy of the slightest value. Nothing indicates more clearly our helplessness in controlling kidney metabolism than the inability to meet this common symptom".

So, it is imperative that a tried remedy of value be found out for a radical cure of this disease.

I have a personal experience of treating this disease, and as many as about 32 cases, were treated in 4 years, with success.

A recent case that was completely cured, I detail below.

Mr. M. a Veterinary Officer, of Madras, aged about 40, married. In January 1932-came from Madras as a guest of a renowned Pattagar, and I was also there at the time. The weather was very chilly—we attended a music party and after dinner retired to bed at 10, P. M. in the night, in different camps. At 6, A. M. in the next morning I was taken by the Pattagar to Mr. M's camp, and he was leaning over a cushion on the cot breathing heavily, with swollen face and unable to talk freely. I was introduced to this gentleman by the Pattagar. I felt his pulse in the wrist as usual and asked him the history. He simply mentioned that the strain on his legs while hearing music caused contusion on one of his legs and that he has applied belladonna pigment. I was surprised to hear such a simple ailment, while he was gasping for breath. He evidently hushed up the fact, as he had no confidence in physicians of the indigenous system. He would

have completely avoided me had it not been for the high praises and recommendations made by the Pattagar. I questioned him if he had his urine examined before and if it contained any albumen. This took him by surprise, as many used to suspect him to be an asthmatic patient before. Since I rightly guessed his case he gave the following history of the trouble.—

That some 15 years ago, when he wanted to insure his life under certain company, he had his urine examined by his friend—a doctor—in the King Institute, Guindy—who was surprised to find lot of albumen in the urine, without the slightest impairment to his health. But the Doctor would not recommend him to be a fit person for insurance. Six months passed—still in good health doing active service. All the doctors who came to know of this were surprised at him. A few years after this, on one hot day, he fainted and fell down, while inspecting cattle, and was removed to a nursing home and treated, and became alright but the urine still contained albumen. Then a few years after this he had a relapse and was brought round with great difficulty. He used to loudly snore, and ball out during sleep, even when he was pronounced to have re-

coverd and looking after his work. Either he himself, or his relations or his friends took notice of his trouble during sleep as it had become habitual. The recommendations of the Pattagar on the one hand and my leading questions about the history of this illness on the other, set his mind right and he began to feel confidence in my treatment, I ran up to my dispensary, in a car, 6 miles off—and brought my kit, examined the urine and the fact was plain. The teaspoon of the urine that I was able to collect from him, became a solid curd on boiling.

I immediately gave the following treatment.

Jalothari	3 pills
Jeevarathna	2 ,,
Decoction Punarnava	1 oz.
Decoction Dasamoola	1 oz.

Fiat Haustus statum. at 9 a. m.

In about a couple of hours the medicine began to act and he had 4 watery motions before 4 p. m.

He was given the following powder in the evening in Barley water.

Karasoodasathu Basma	10 grs.
Nitre Basma	10 grs.

Pulv I.

The pain and swelling in his leg subsided, hard breathing and other troubles lessened at night.

From the next day forwards, I continued to give the powders and decoctions alone leaving off the pills.

I kept him on salt free diet for one month living on Milk, Coffee, Barley water, oranges and sugar.

It is a marvel to note that, how in Chronic Nephritis, the physiological and pathological functions of the kidneys that would have been changed viz:—Atrophy, hypertrophy, granular or fatty degenerations, would be rectified and a permanent cure would result.

It is equally marvellous to observe that an enlarged and hypertrophied liver becomes alright in infantile cirrhosis of the liver, by some indigenous specifics, advertised now-a-days, and function properly.

The modern scientists should investigate such theories, suitable to convince the civilized world, and solve the problem,

The cancer cure professed by a physician of Calicut, perplexes the medical world.

All these things should be taken into head by the Research Scholars, for the benefit of the nation, and in earnest.

In appreciation of the treatment rendered to him, he mentions in the visitor's book of my dispensary as follows:

3.1.32 — 'I had an unforeseen necessity to place myself under the treatment of Dr. T. G. Ramamurthi Iyer, the Physician attached to the Taluk Board Dispensary at Avulpundurai during my short stay at........as the Pattagar's guest. Owing to my exposure in the dew I was suddenly taken ill and the nature of the illness was such, that had its cure been undertaken by the allopathic system of treatment, would have taken at least a fortnight. Mr. Iyer who happened to be on the spot quite accidentally undertook my cure though with some diffidence which, I may say, I also shared at the beginning. For there was just a couple of days and I was due at Madras on the 4th instant. To my surprise and gladness I was brought round to my normal self within 3 days.'

1. *Jallothari Pills.*

Exsciccated Borax, Pulvis ginger, Pulvis Pepper, Pulvis Longpepper. Alum, Dried Seafroth, Induppu, Gourd (Suraikai) Seeds, Ammonium Chloride Each 3/10 tolas.

Purified Croton Seeds 3 tolas.

To be rubbed together for 12 hours with the juice of kombukalli and made into 2 grains pills.

2. *Jeevaratna Pills.*

Pulvis of:—Chebulic myrobolans, Ginger, Pepper, Longpepper, Purified Calomel (Rasakarpura) Purified Croton Seeds equal parts.

To be rubbed for 48 hours with strained thin soojee and made into the 5 grs. pills.

3. *Karasooda Sathu Basma.*

Exsciccated Borax Karpoora Silajit, Nitre, Purified shell of Eggs, Alum Conch, (Palagarai) equal parts.

To be rubbed for 6 hours with lemon juice and made into lozenges of the size of a half a rupee silver piece, dried and inserted into a crucible made of chunam (Quicklime) and

covered with cloth soaked in clay, dried, and burnt with 50 cow-dung cakes. Then the lozenges to be taken out of the cooled fire, powdered and stored for use.

4. *Nitre Basma.*

Nitre	15 tolas.
Bomboo Salt	2 ,,
Ammon Chloride	1½ ,,
Alum	15 ,,

To be made into a paste with lemon juice q. s. and fried in a new clay (burnt) Chatti until all the water evaporates.

The following tonics were given to my patients for 3 months during convalescence.

(1) Silajit Rasayana 1 grain doses for 48 days twice a day.

(2) Gold and Pearl Basma 1 grain each for the rest of the period.

The patients are quite hale and healthy."

Sandamarudam.

This indigenous preparation is extensively used by the Physicians of Siddha system, in various acute and chronic diseases, with great success. The preparation contains only mercury and sulphur in different proportions. It contains only five ingredients which I give below. Four of the ingredients are the compounds of mecury. Even though the individual ingredient contains both mercury and sulphur, yet they do not possess the virtue of Sandamarudam, when each of them tried alone.

Purified:—

Crude Calomel(Rasakarpooram)	10	parts.
Cinnabar (Lingam)	8	"
Perchloride of mercury (Veeram)	2	"
Sulphur	2	"
Rasa Sindura	2	"

To be triturated with sufficent quantity of white yolk of eggs and made into lozenges of the size of a quarter anna coin and dried. These dried lozenges are to be dipped in a boiling water for two seconds and then dried again. Again they are to be dipped in a boiled pudding of Rice and gourd for 2 seconds and

dried. Now they are to he finally powdered and preserved in bottle for use.

Dose:—1 to 3 grains.

Prescribed for the following disenses.

13 kinds of Janni (Sannipatha), Fistula, Sprue, Cholera, Vatharogas, Soolai Rogas, Paraplegia, Hemiplegia. Facial Paralysis, Malignant growths, Panduroga, Orchitis, Ascites, Anaemia, Chlorosis, Leprosy, Snake bite, Gunma, Syphilis, Epilepsy, Menstrual disorders, Arthritis, Chronic and Septic ulcers, suppurating infections, Tetanus, Scrofula, Gastric ulcers, Rabies, Rat bit, Fevers, and skin diseases.

Western Pharmacopoeia, describes the actions of Perchloride of mercury and sulphur, as alternative, purgative, diuretic, antiseptic, disinfectant, paraciticide, antisyphilitic, and laxative.

Cinnabar and Rasasindura are not used in B. P.

The actions described for the preparations of mercury are identical both in western and eastern systems. Notable properties of mercury salts:—

Intestines:—Arrest putrefactive changes in the duodenum and intestines.

Liver:—Antiseptic properties of mercury check the growth of bacteria.

Blood:—Increase the number of red blood corpuscles and Haemoglobin. Arrest the movements of the leucocytes.

Kidneys:—Diuretic.

Specific for Syphilis.

Summary:—Mercury Salt have a powerful action as an antiseptic and bactericide. Possess diuretic and tonic properties.

Sandamarudam is advised for various ailments, whether they are caused by a specific bacteria or not.

It is not a doubtful remedy for the said diseases, but its action is sure and certain.

The toxic action is lessened by the addition of "White of Eggs" which is an antidote.

The writer has treated more than a thousand cases of syphilitic affections, rheumatic fever, arthritis, septic ulcers and wounds, multiple abscess, myalgia and neuralgia, migraine, and also Facial Paralysis, Paraplegia and Hemiplegia, and are completely cured.

From my experience, I safely conclude that Sandamarudam acts as a specific in the diseases described above.

I always insist on salt free diet and advise to live on milk and boiled rice alone.

The medicine is given only for 6 days both morning and evening in Palmyra Jaggery. It is repeated after a month when necessary.

For painful affections of the joints, I usually rub on "Mayana Thailam", which is a volatile oil, distilled out of beeswax, mustard, Santra rice, nutmeg, cloves etc, and the relief is miraculous.
